

# **HIV TREATMENT AS PREVENTION: VIETNAM'S EXPERIENCE**

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# **HIV TREATMENT AS PREVENTION**

- Evidence shows that successful viral suppression through treatment can substantially reduce the risk of vertical, sexual and blood-borne HIV transmission.
- According to a recent University of Washington study of heterosexual couples (each with one HIV-positive and one HIV-negative person) in seven countries in sub-Saharan Africa, the HIV transmission rate was 92% lower when the HIV-positive partner was on treatment.
- Treatment can become part of a combination prevention strategy.

# **HIV TREATMENT AS PREVENTION**

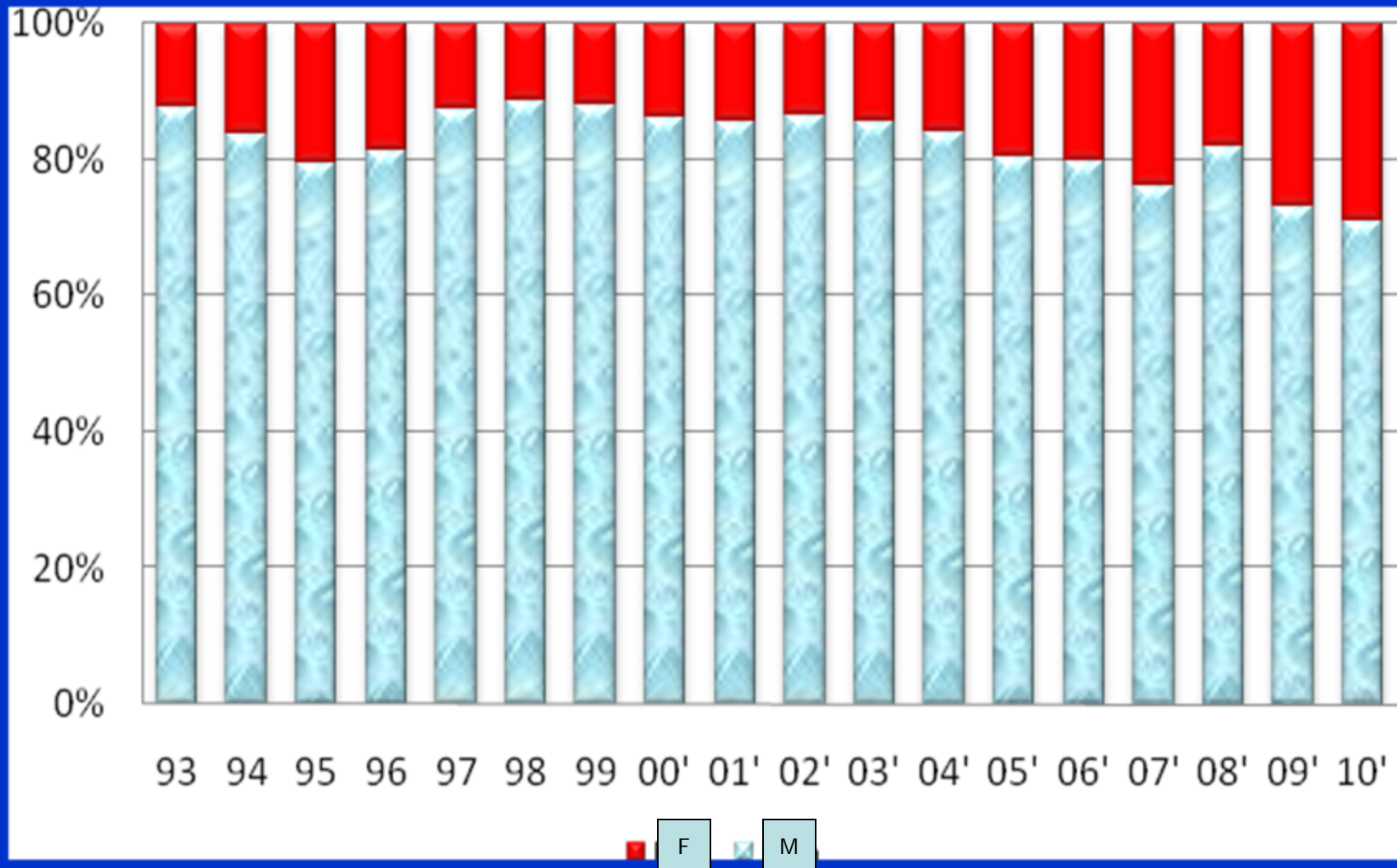
- **Effective implementation of antiretroviral therapy will also result in other prevention benefits, including lower rates of tuberculosis, lower incidence of pregnancy-related deaths among women, and fewer cases of malaria.**
- **According to a recent study, AIDS is responsible for 61,000 of the 350,000 annual maternal deaths worldwide.**

# **OVERVIEW OF THE CURRENT HIV EPIDEMIC IN VIETNAM**

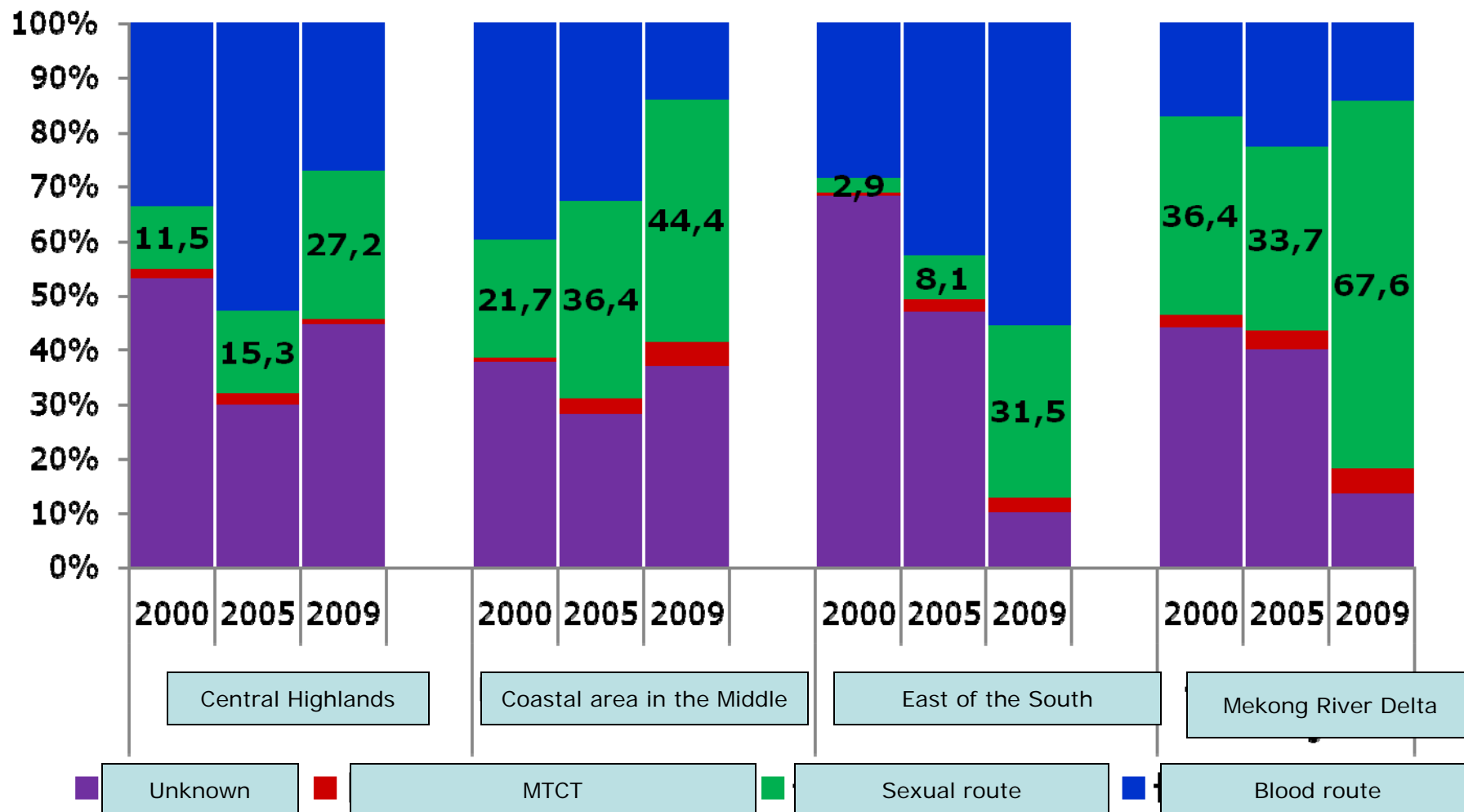
# HIV EPIDEMIC IN VIETNAM, 2010

<b>HIV incidence</b>	<b>13.815</b>
<b>AIDS incidence</b>	<b>6.510</b>
<b>AIDS death</b>	<b>2.556</b>
<b>Total living HIV cases</b>	<b>183.938</b>
<b>Total living AIDS cases</b>	<b>44.022</b>
<b>Total cumulative death</b>	<b>49.477</b>

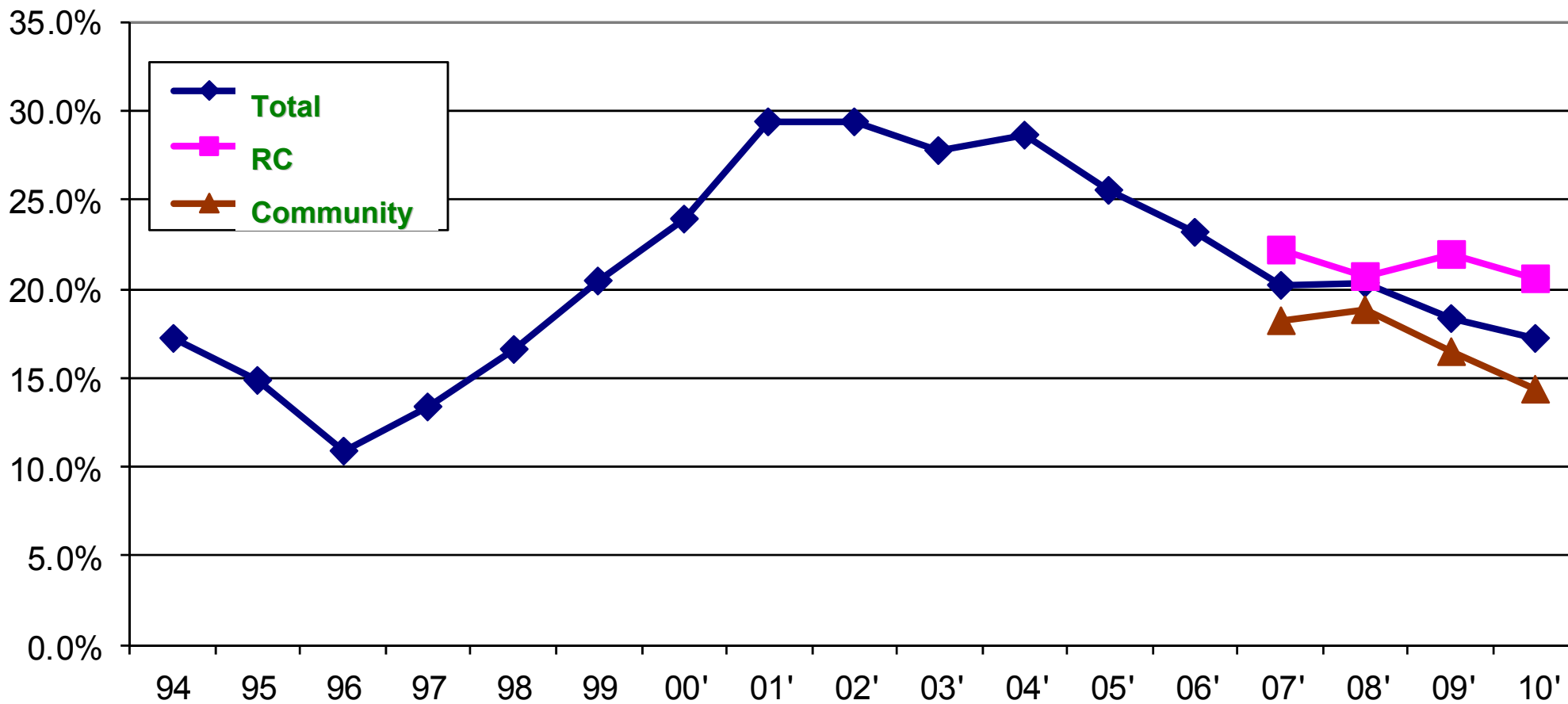
# HIV DISTRIBUTION BY GENDER OVER YEARS



# RISK CATEGORY BY REGIONS

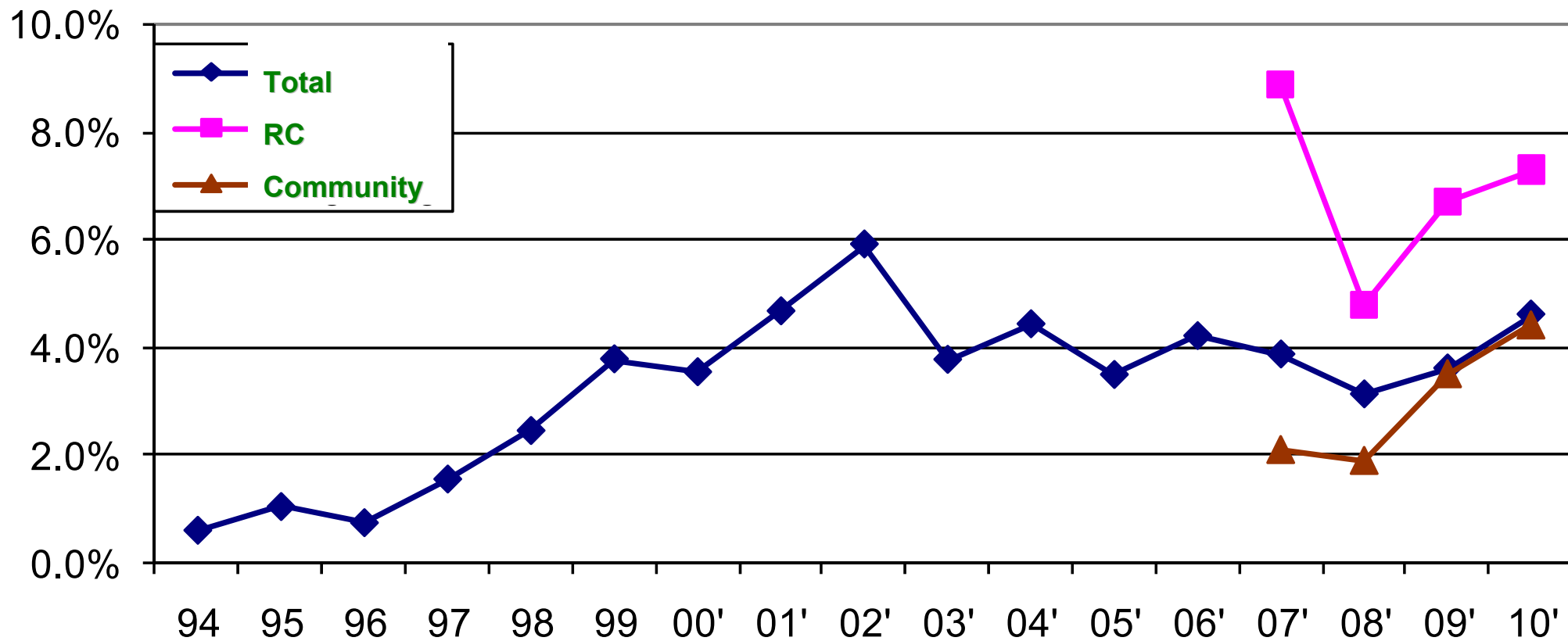


# HIV PREVENTION AMONG IDUs

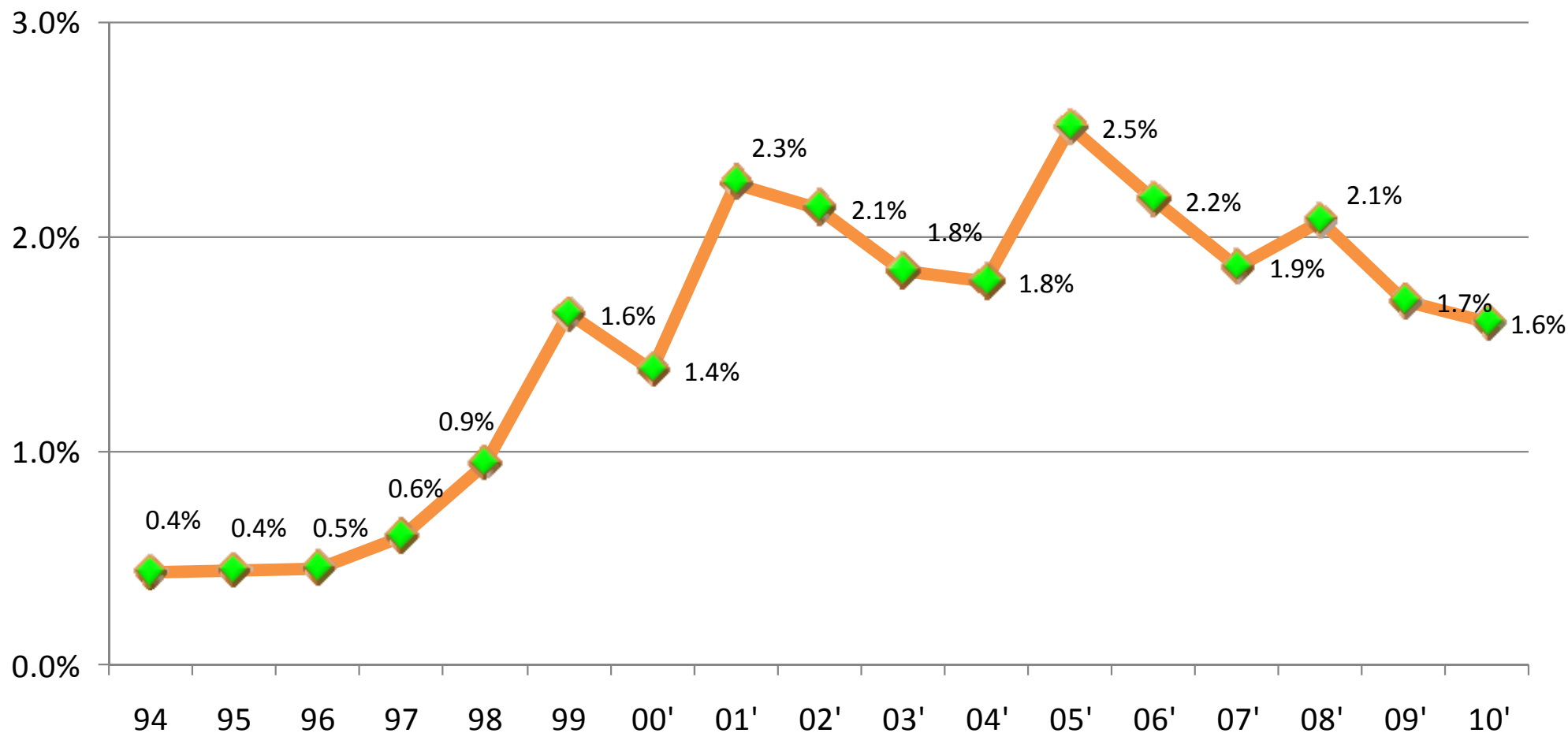




# HIV PREVENTION AMONG FSWs

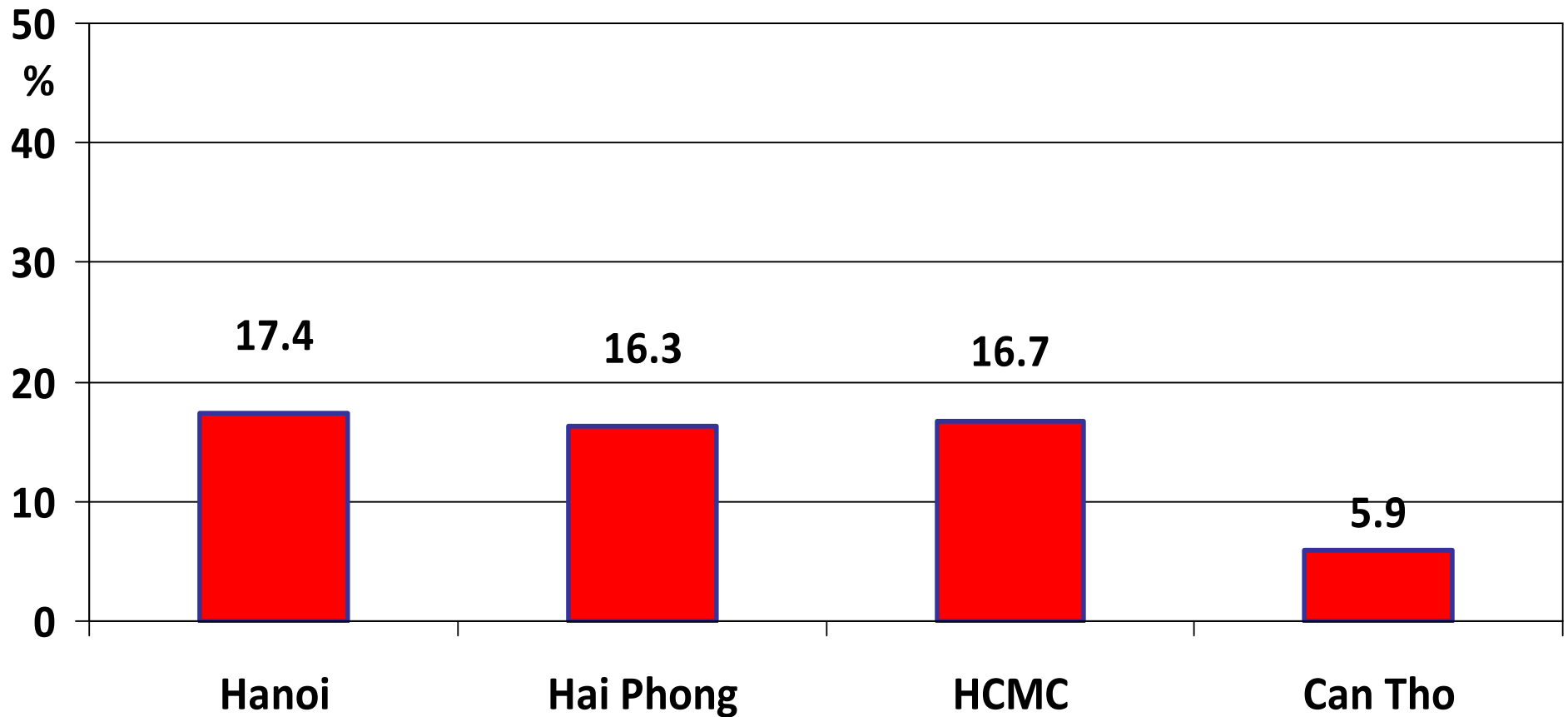


# HIV PREVENTION AMONG STI PATIENTS

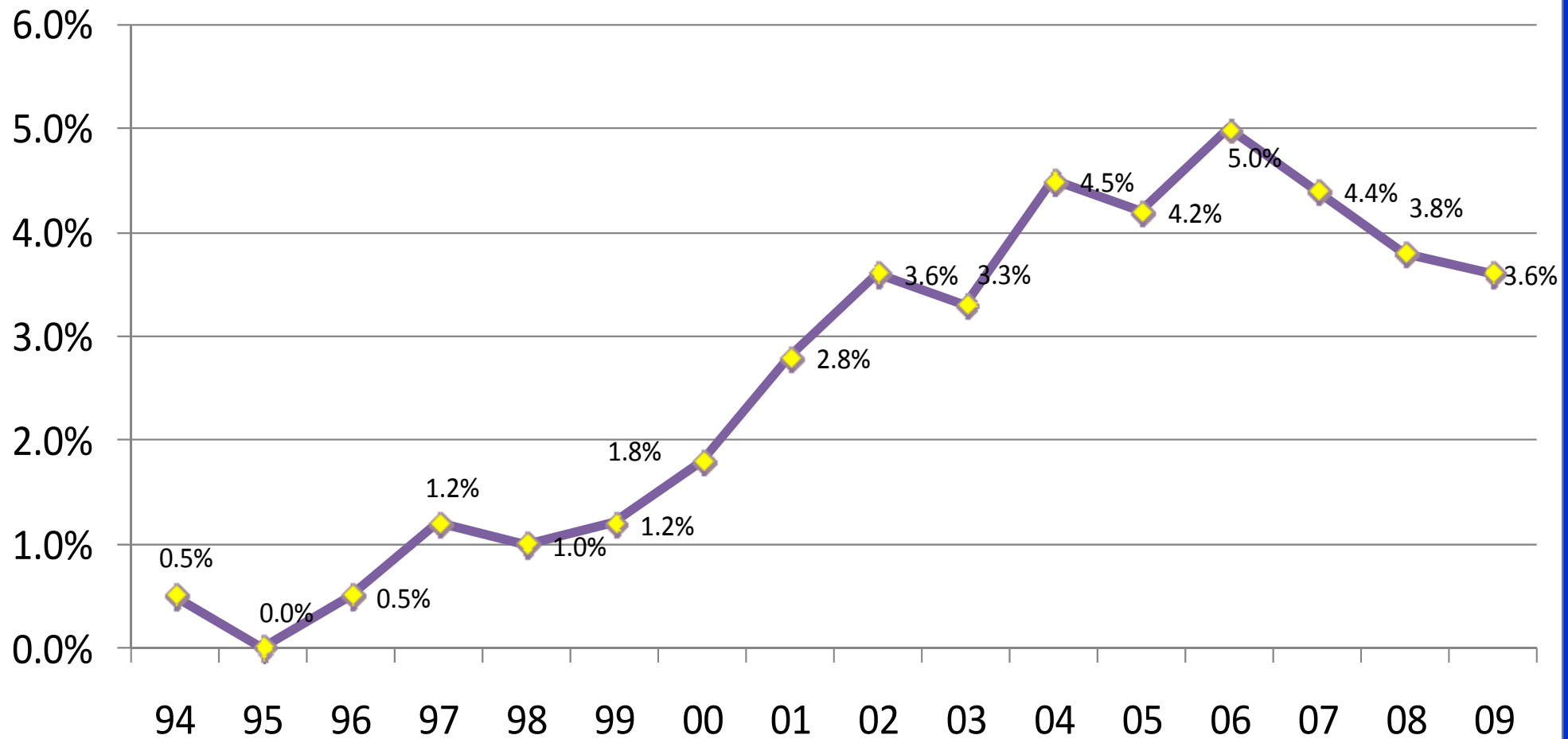


# HIV prevalence among MSM (IBBS 2009)

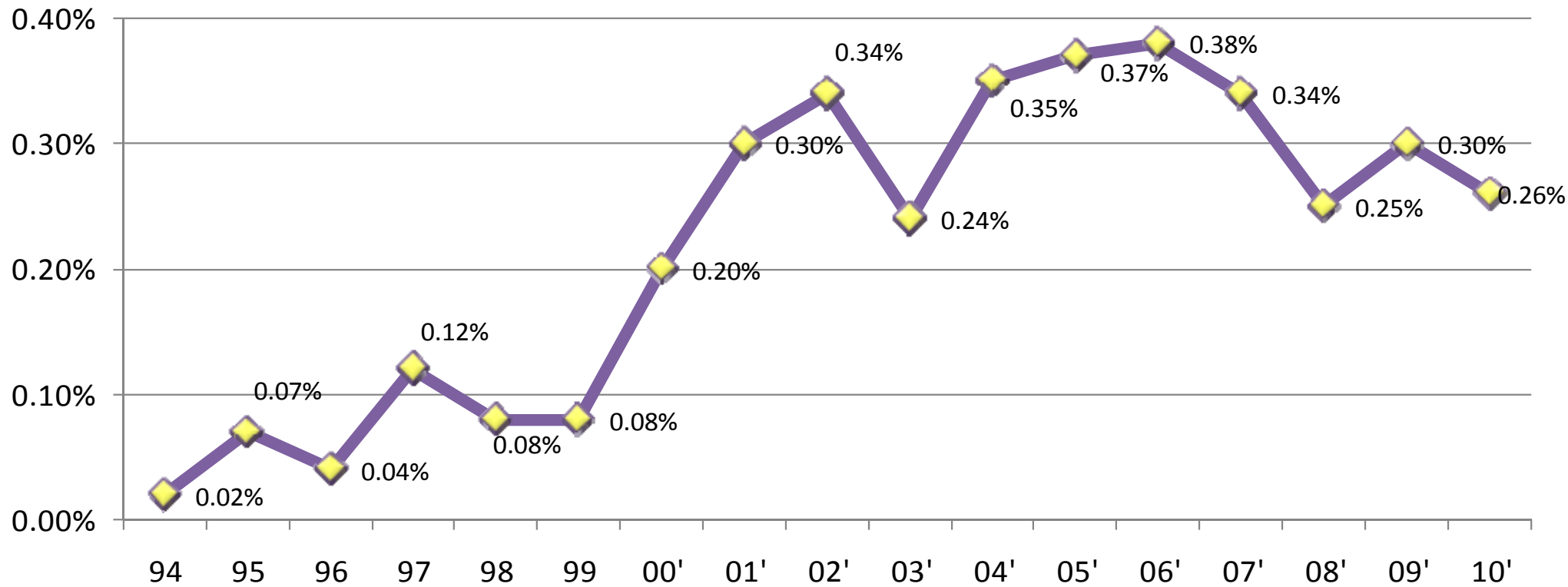
IBBS 2009



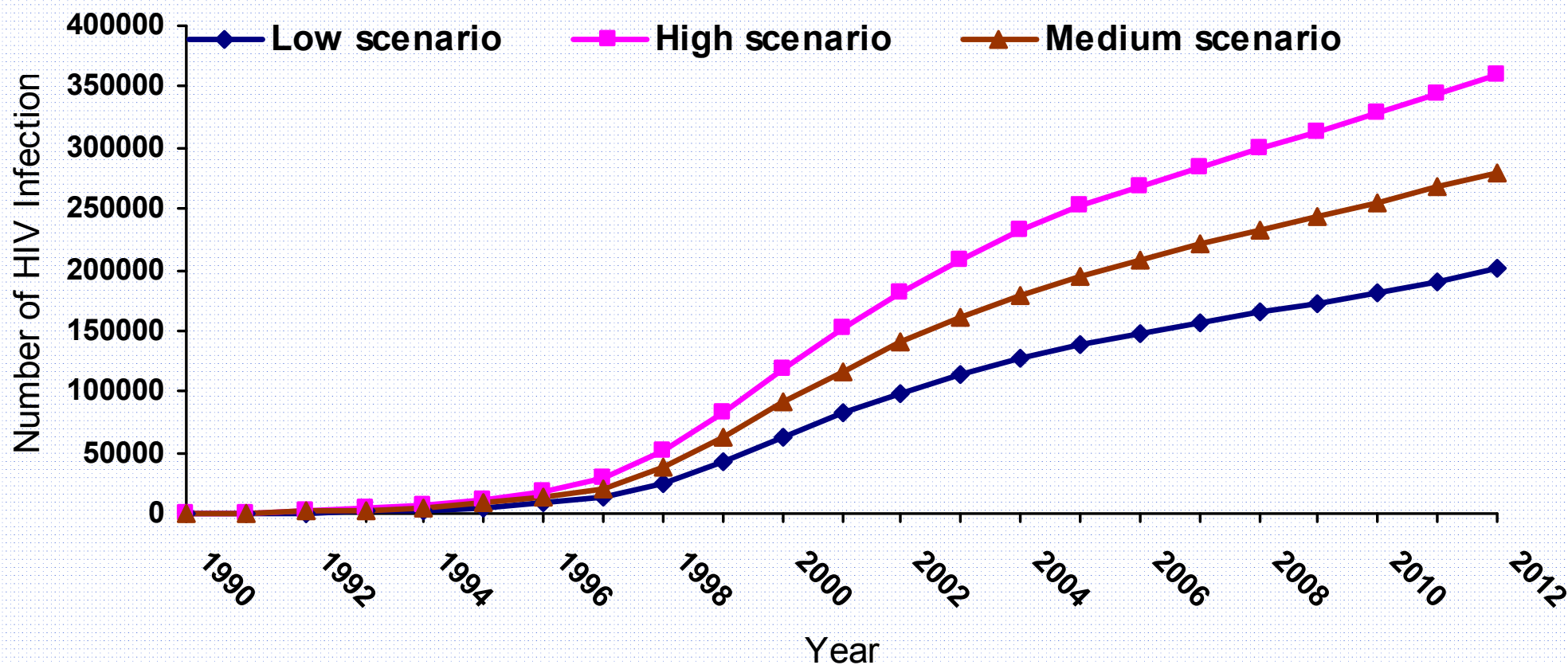
# HIV PREVENTION AMONG TB PATIENTS



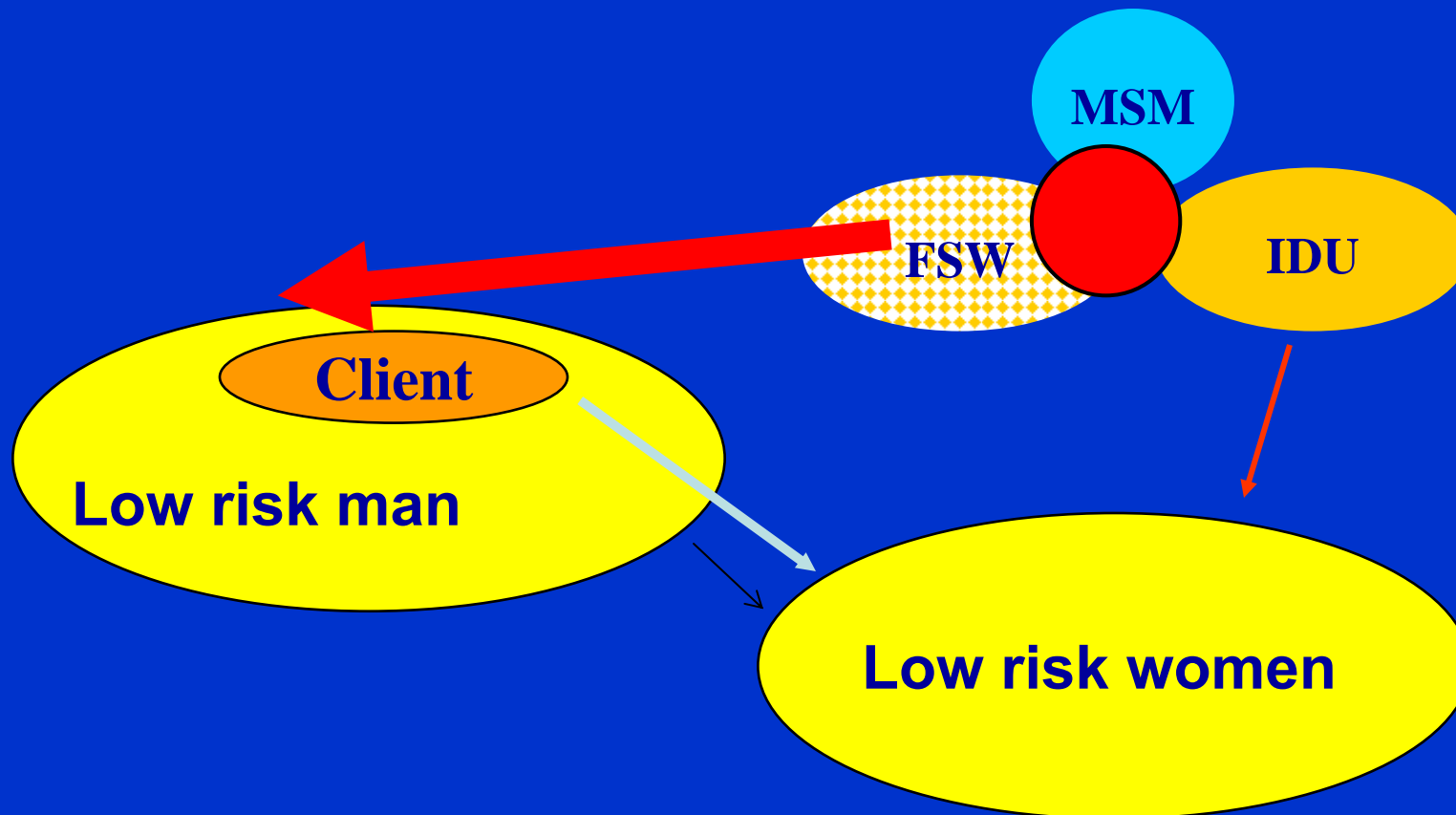
# HIV PREVENTION AMONG PREGNANT WOMEN



# Estimated HIV infections in Vietnam (adults and children)



# DYNAMIC OF HIV TRANSMISSION IN VIETNAM



# ACTION PROGRAMS

1. Information, Education, and Behavioral Change Communication;
2. Harm reduction and HIV prevention
3. Care and treatment for PLHIV
4. HIV Surveillance, Program Monitoring and Evaluation
5. Access to HIV treatment
6. PMTCT
7. Management and treatment of STIs
8. Blood transfusion safety
9. Strengthening capacity building and international cooperation



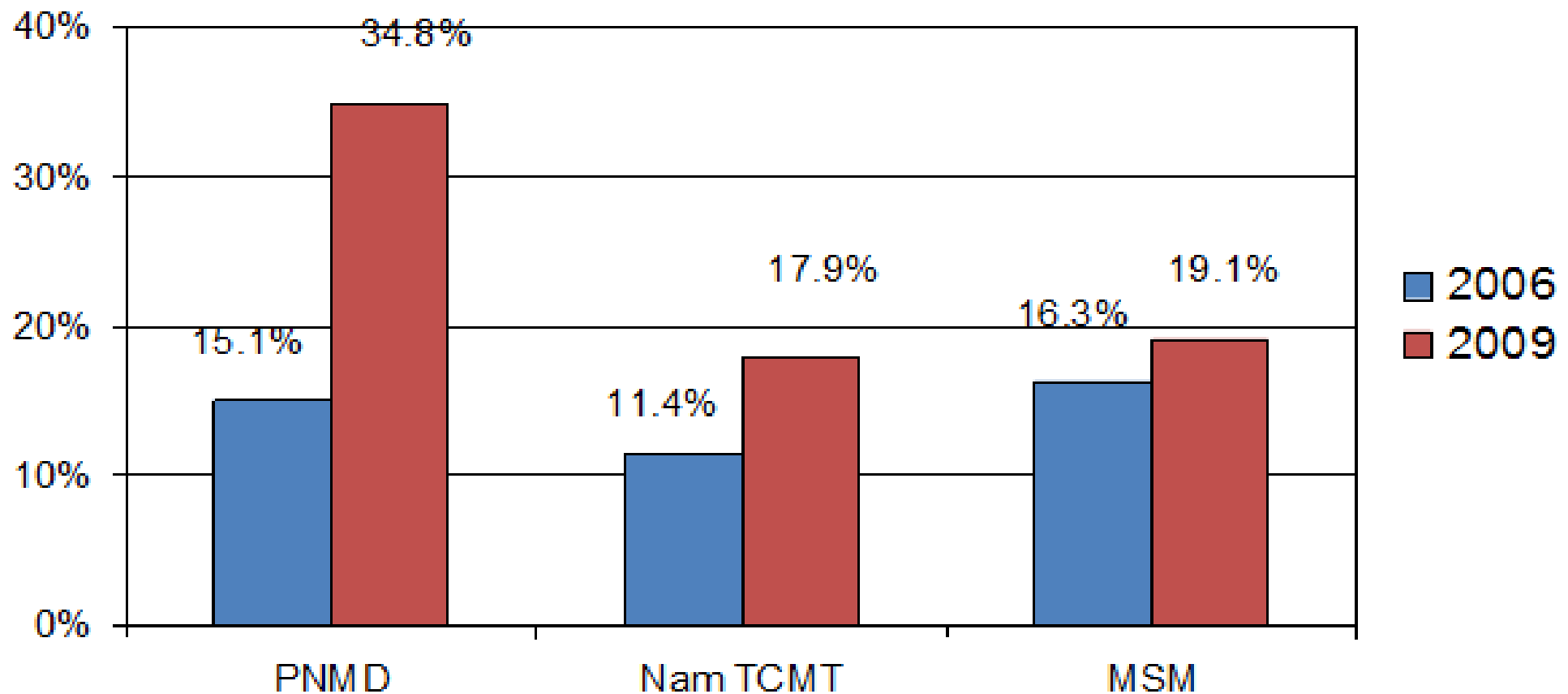
# **HIV TREATMENT**

# Operational outcomes of voluntary counseling and testing

Content	Results							
	2002	2003	2004	2005	2006	2007	2008	2009
No. of voluntary testing counseling stations	1	24	122	161	227	217	246	256
No. of visits for counseling prior to testing	365	9,903	55,400	178,326	242,116	263,507	309,860	404,573
No. of people being tested	284	8,584	41,507	137,018	200,506	238,575	286,120	364,026
No. of visits for counseling after testing	61	6,858	39,491	131,661	168,829	210,916	260,358	314,677
No. of people having positive test result	67	1,686	5,670	14,976	25,044	29,471	33,265	35,451

Source: Report on HIV/AIDS PC (Forms D26, D28), Ministry of Health

# HIV tested over the past 12 months and being aware of the test results



# MOH ART GUIDELINE (2009)

## ART

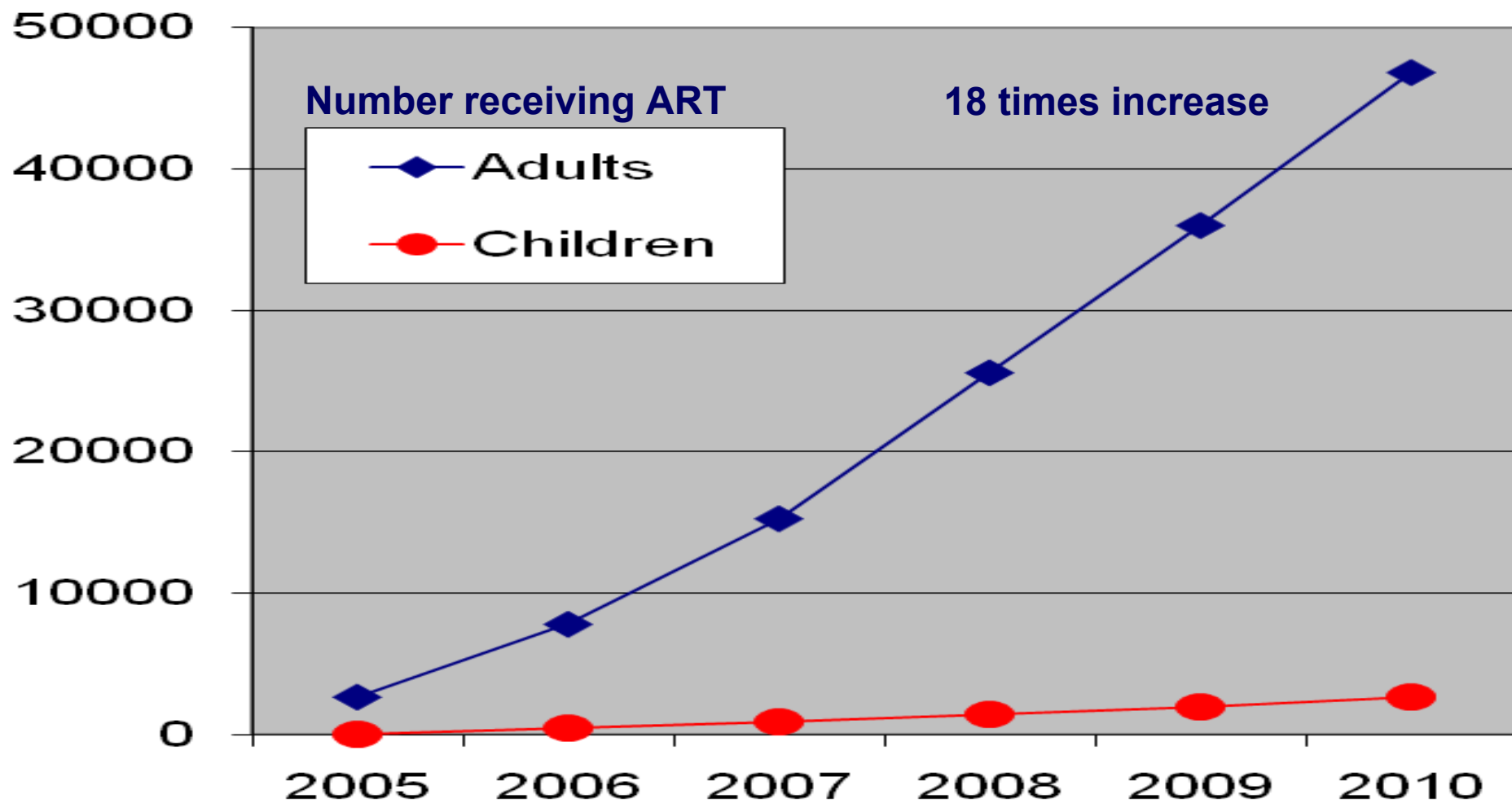
**AIDS Phase IV regardless CD4 counts**

**AIDS Phase III,  $< 350 /\text{mm}^3$**

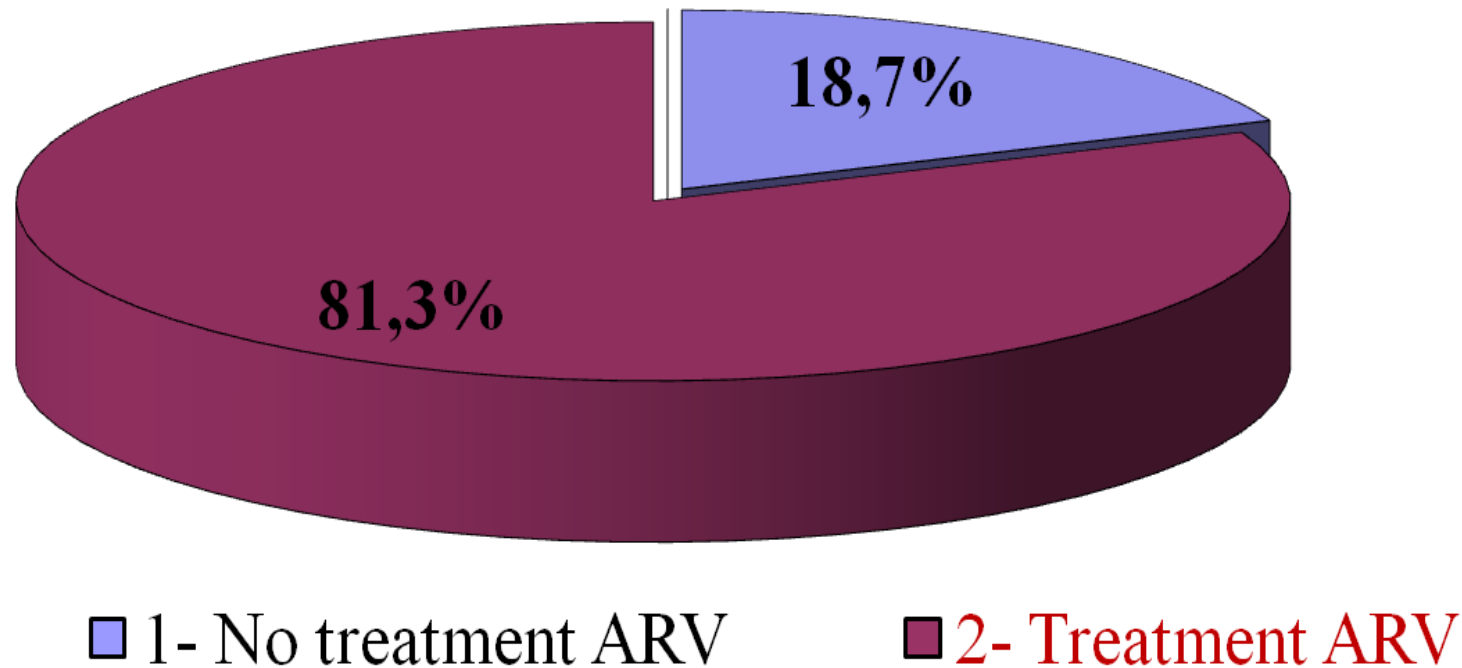
**AIDS Phase I, II ;  $\text{CD4} < 250 /\text{mm}^3$**

**AIDS Phase III, IV without CD4 counts**

# ART IN VIETNAM 2005-2010



# ART AMONG HIV INFECTED PREGNANT WOMEN



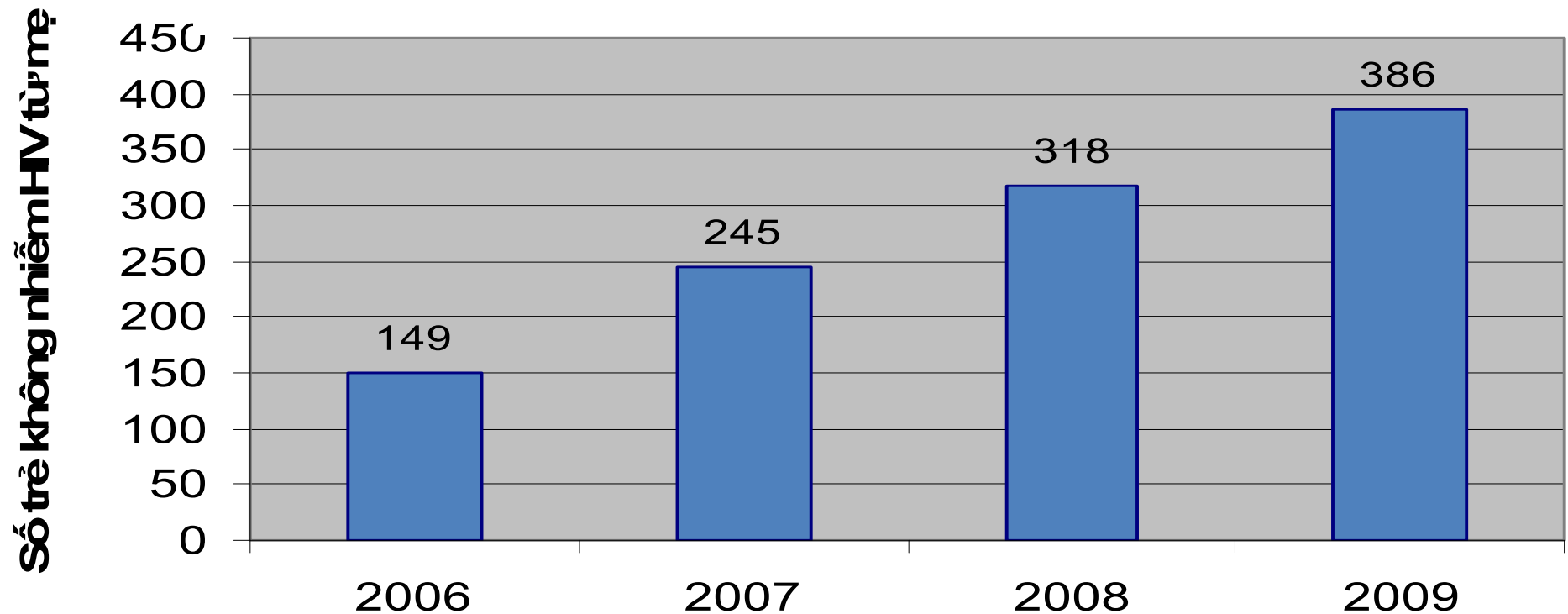
- ✓ *Reasons of not treatment : comes too late, stillbirth, disagree of treatment, late testing ..*

***Nguyen Viet Tien et al.***

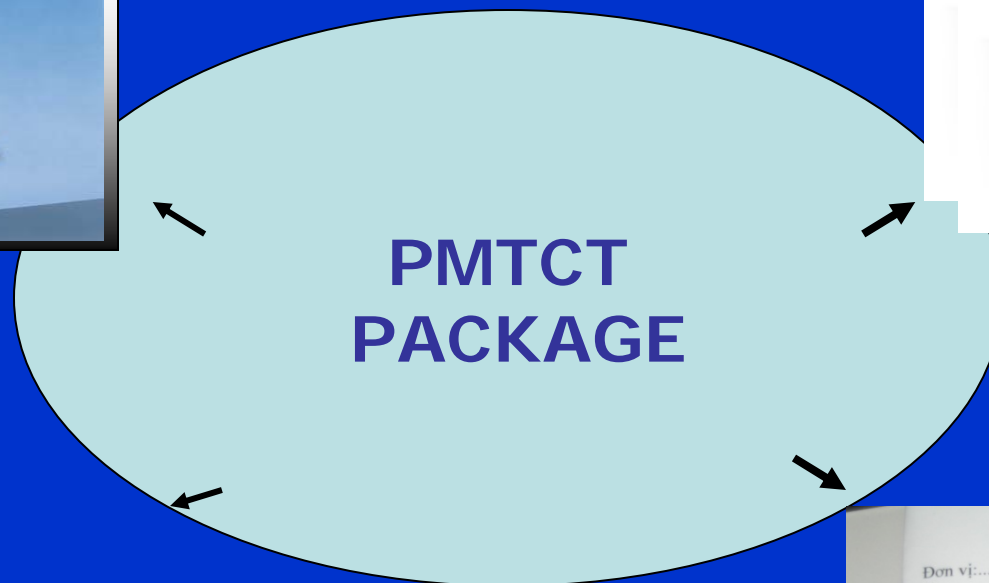
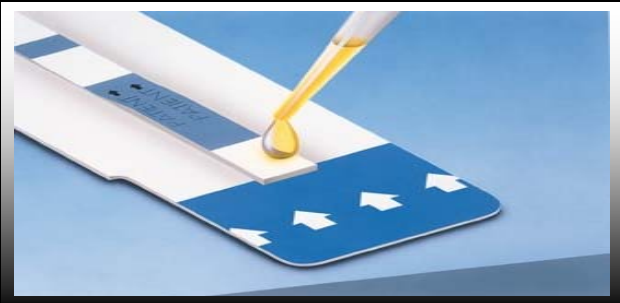
# ART AMONG NEWBORNS

Regimen ARV for newborn		
No treatment	16	2.0 %
Treatment syrups NVP or NVP+AZT (1 wk or 4 wks)	774	98.0 %

# Estimates of the number of children prevented by PMTCT Program







Đơn vị:.....

**PHIẾU THEO DÕI VÀ GIỚI THIỆU DỊCH VỤ CHUYÊN TIẾP**

Mã số

Họ và tên mẹ: ..... Năm sinh:..... Tuổi:...

GIỚI THIỆU ĐẾN DỊCH VỤ CHĂM SÓC ĐIỀU TRỊ

MẸ được giới thiệu đến: .....

Địa chỉ: .....

Điện thoại: ..... Người liên hệ (nếu có) .....

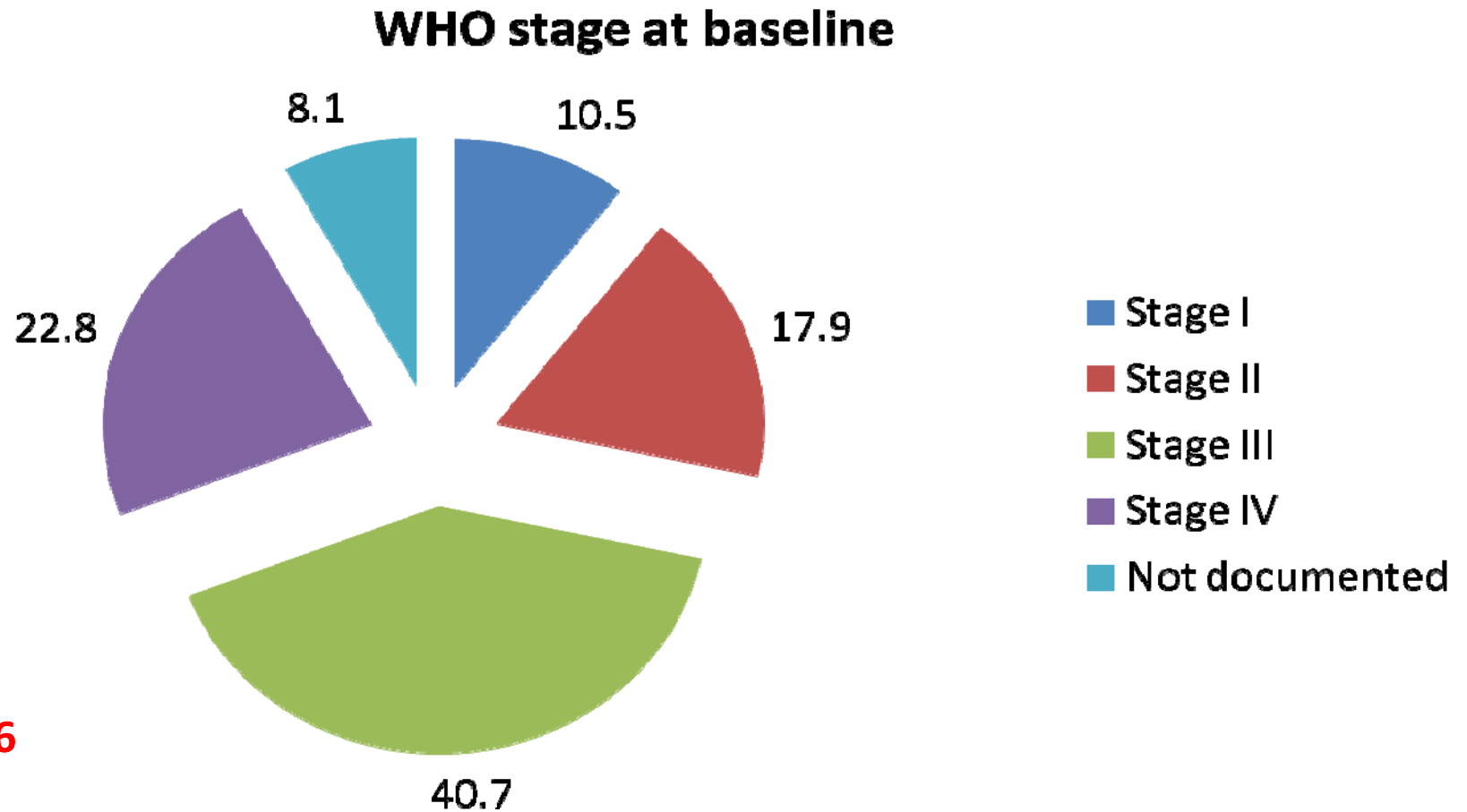
CON được giới thiệu đến: .....

Địa chỉ: .....

Điện thoại: ..... Người liên hệ (nếu có) .....

GIỚI THIỆU ĐẾN CÁC DỊCH VỤ KHÁC

# WHO stage at ART

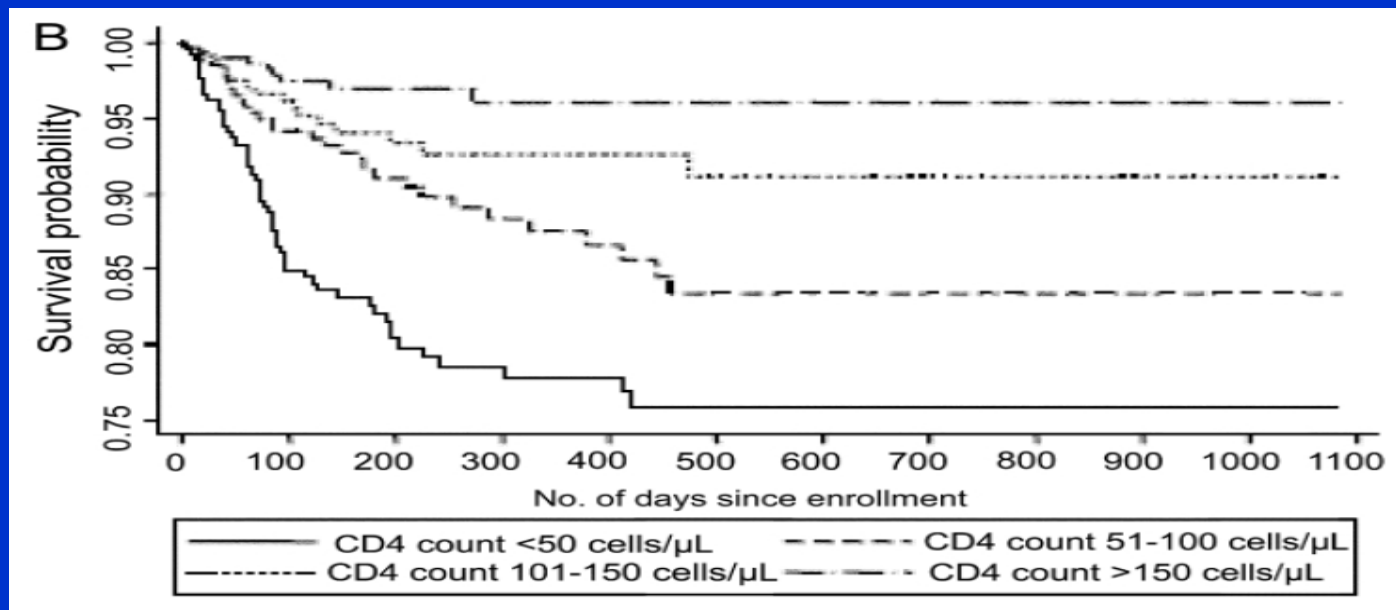


**N= 7.616**

**MOH, VAAC**

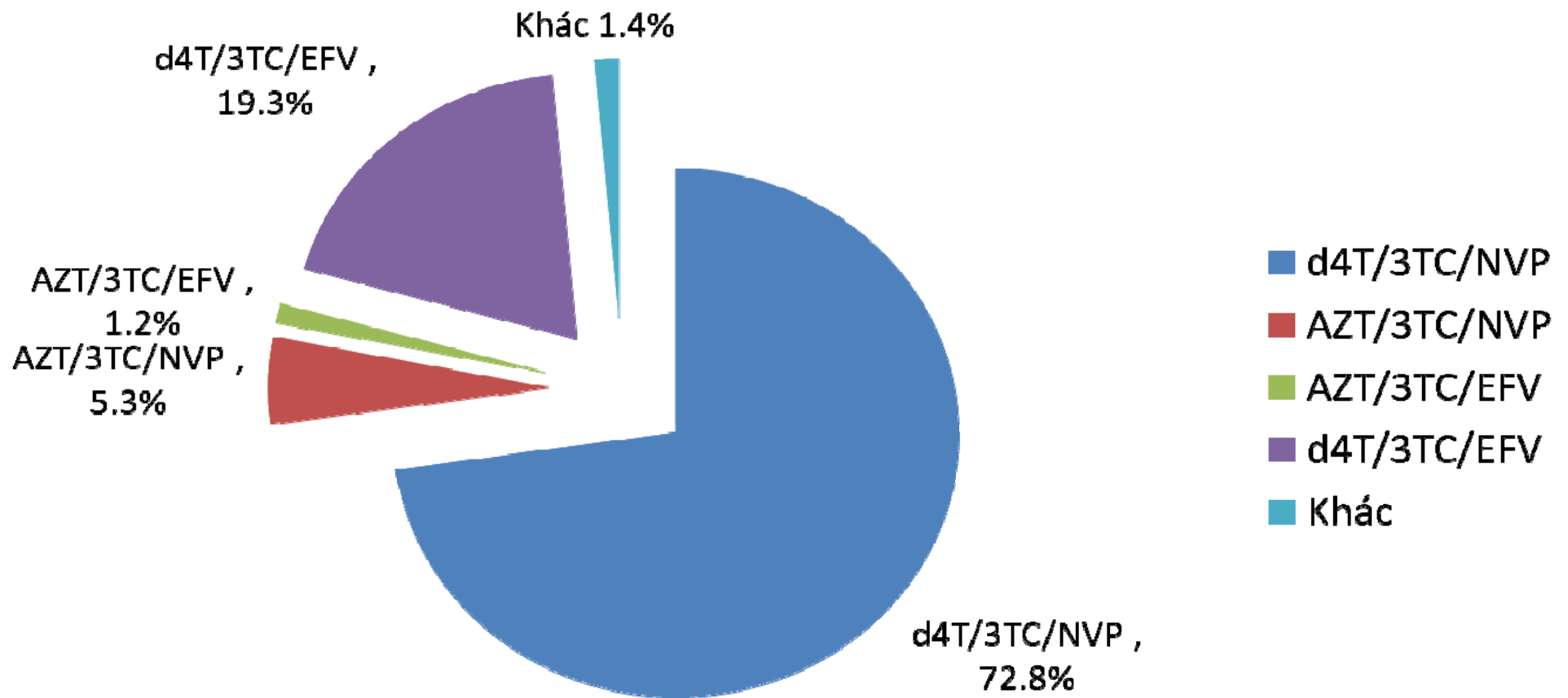
# CD4 at beginning of ART treatment

	2005	2006	2007	2008	2009
<b>N</b>	<b>129</b>	<b>910</b>	<b>1925</b>	<b>2437</b>	<b>2214</b>
<b>CD4 mean</b>	<b>22</b>	<b>54</b>	<b>73</b>	<b>75</b>	<b>91</b>



Lawn SD et al, CID 770 (2006)

# ART regimes at the beginning



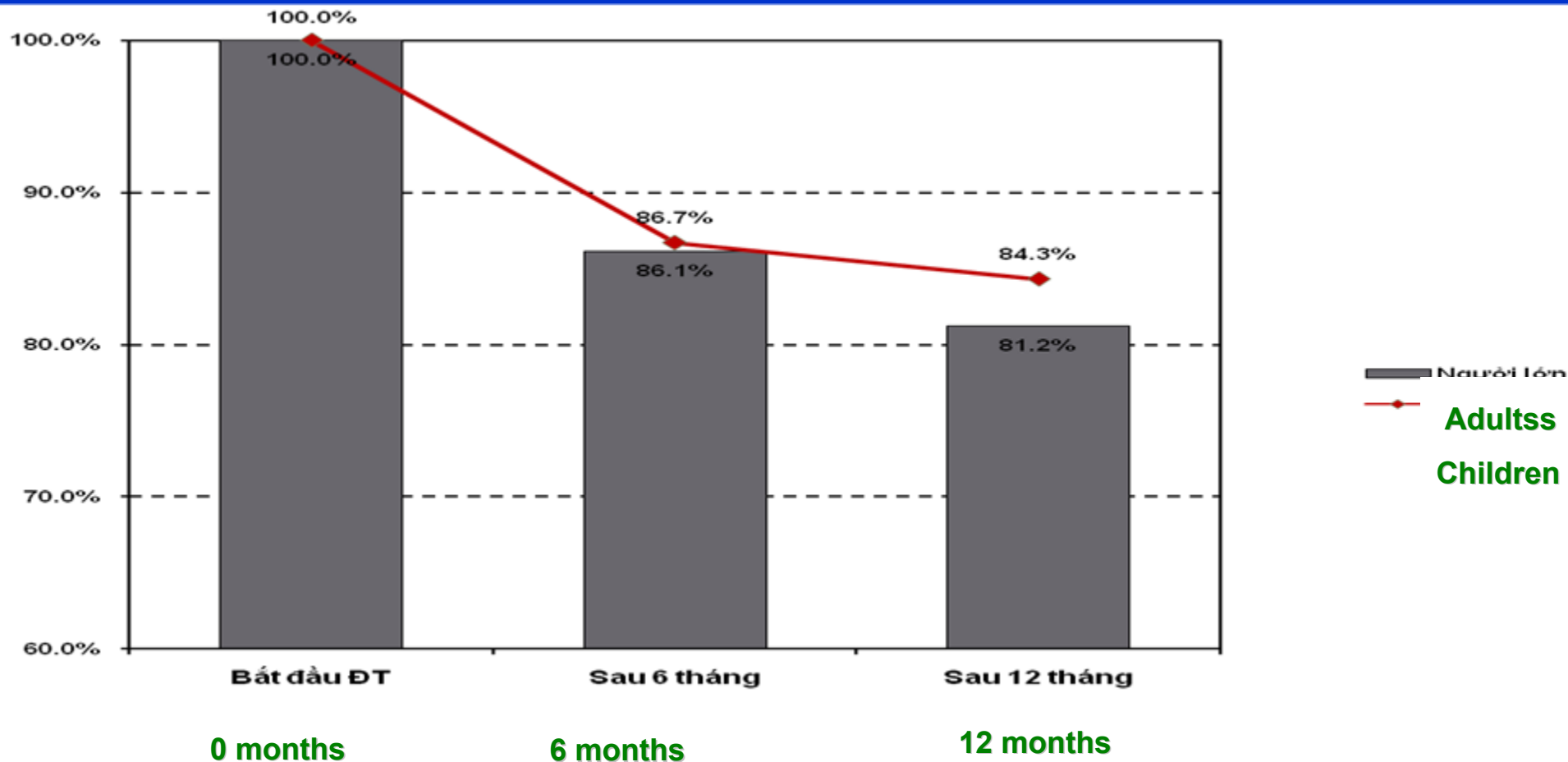
# Link to TB treatment

Vietnam Nam 2009	
(A) Estimated TB/HIV death	3101
(B) Estimated AIDS death	7895
% (A) / (B)	39.3%
Only 28% TB/HIV treated with both TB and ARV in 2009 (UNGASS 2010).	

# ART compliance

	6 months	12 months	24 months	36 months
All patients	89.0%	84.5%	79.5%	75.7%
IDU	87.5%	82.4%	74.9%	69.7%
Non - IDU	93.0%	90.3%	88.7%	88.5%

# Rate of survival after 6 months and 12 months of ARV treatment



*Report on the effectiveness of ARV treatment and result of early warning of HIV drug resistance data collection in 2009*

# Survival and causes of death in HIV patients with ART in a randomized control trial in Northern Vietnam (2007-2010)

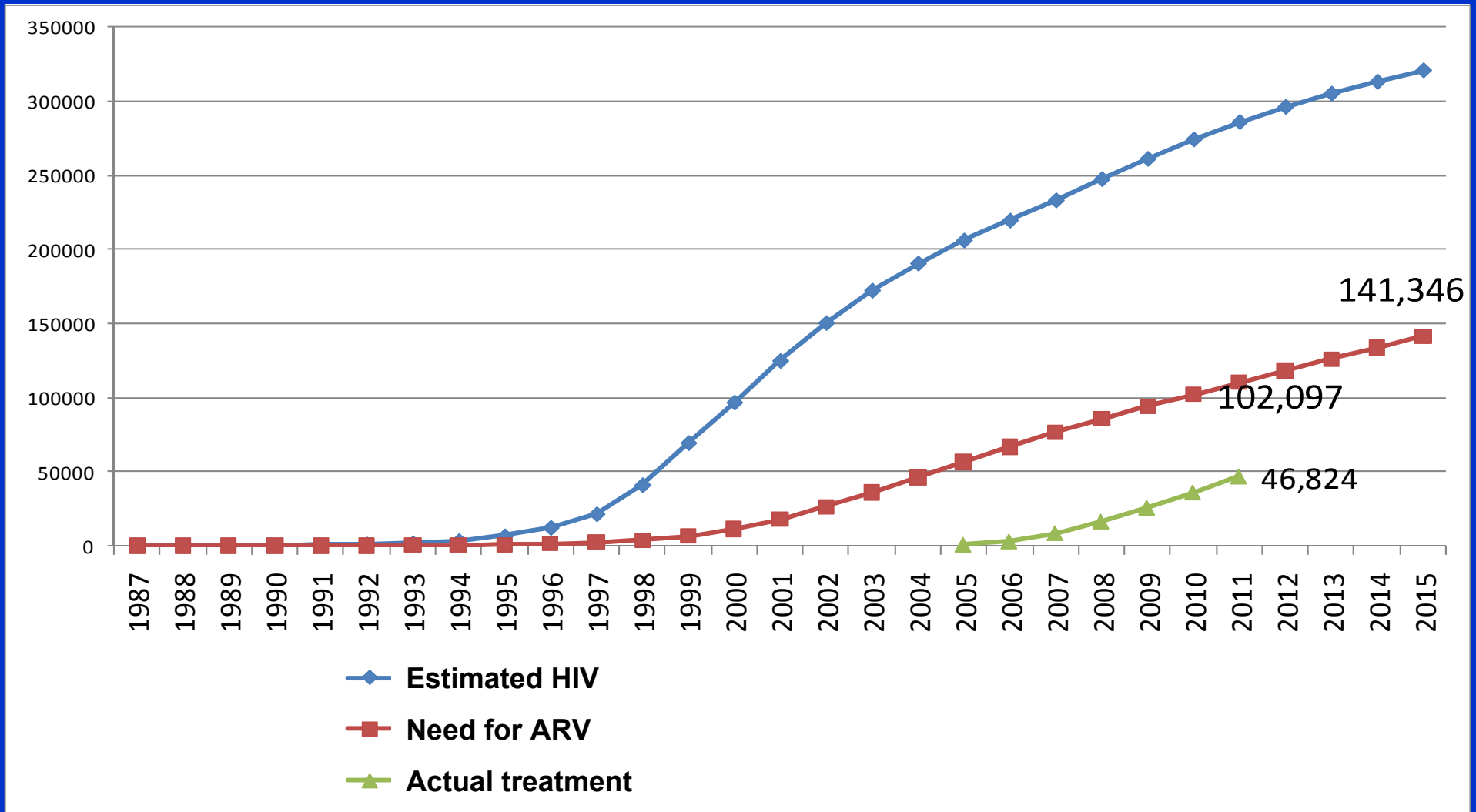
1. Mortality rate was 7.4/100 person-years which is higher than that in high-income settings but lower than that in other low-income settings.
2. Major cause of AIDS-related deaths was tuberculosis, followed by penicilliosis, MAC and hepatic failure.
3. No significant difference in mortality between the intervention and control group.
4. Predictive factors for death: low CD4 count, clinical stage 3/4, high viral load, age > 35 years old, known HIV+ more than 12 months, low BMI < 18kg/m<sup>2</sup>, low hemoglobin level <100g/l.
5. Delay of ART treatment causing significant decrease of CD4 and more severe immuno-suppression.
6. Most of the deaths occurred in the first 6 months → early ART initiation and intensive follow-up during the first 6 months of ART might decrease AIDS-related mortality.



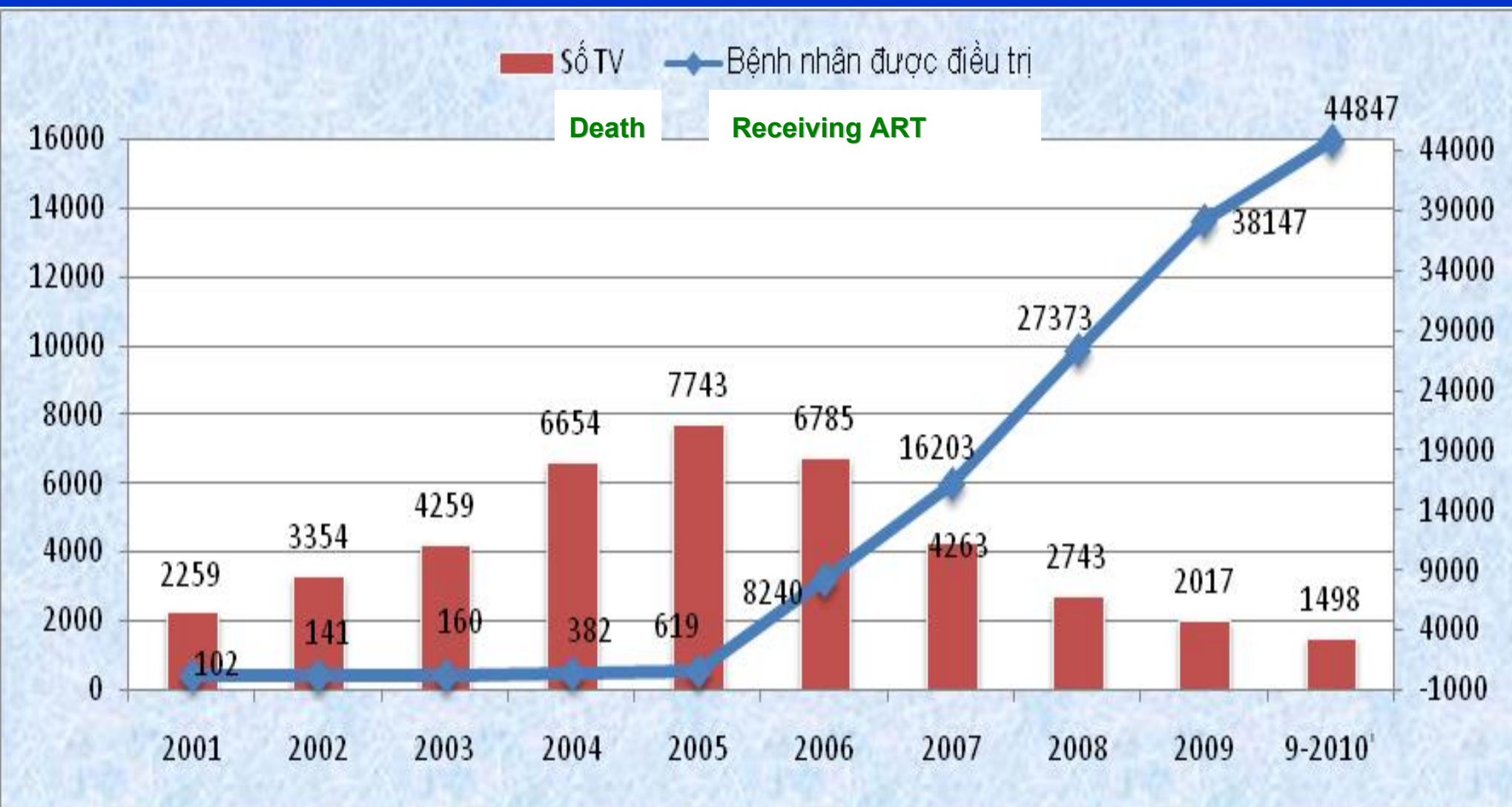
# Mean Adult HIV Care and Treatment Costs per Patient per Year

	VND	USD
<b>Adult Outpatient - Cost per patient per year</b>		
.Pre-ART	2,833,166	135
.1 <sup>st</sup> line ART (Year 1)	7,594,995	362
.1 <sup>st</sup> line ART (Year 2+	6,486,439	309
.2 <sup>nd</sup> line ART	27,803,065	1,324
<b>Adult Inpatient – Cost per episode</b>		
	4,904,772	234

# Number of adult patients need ART (CD4<350)

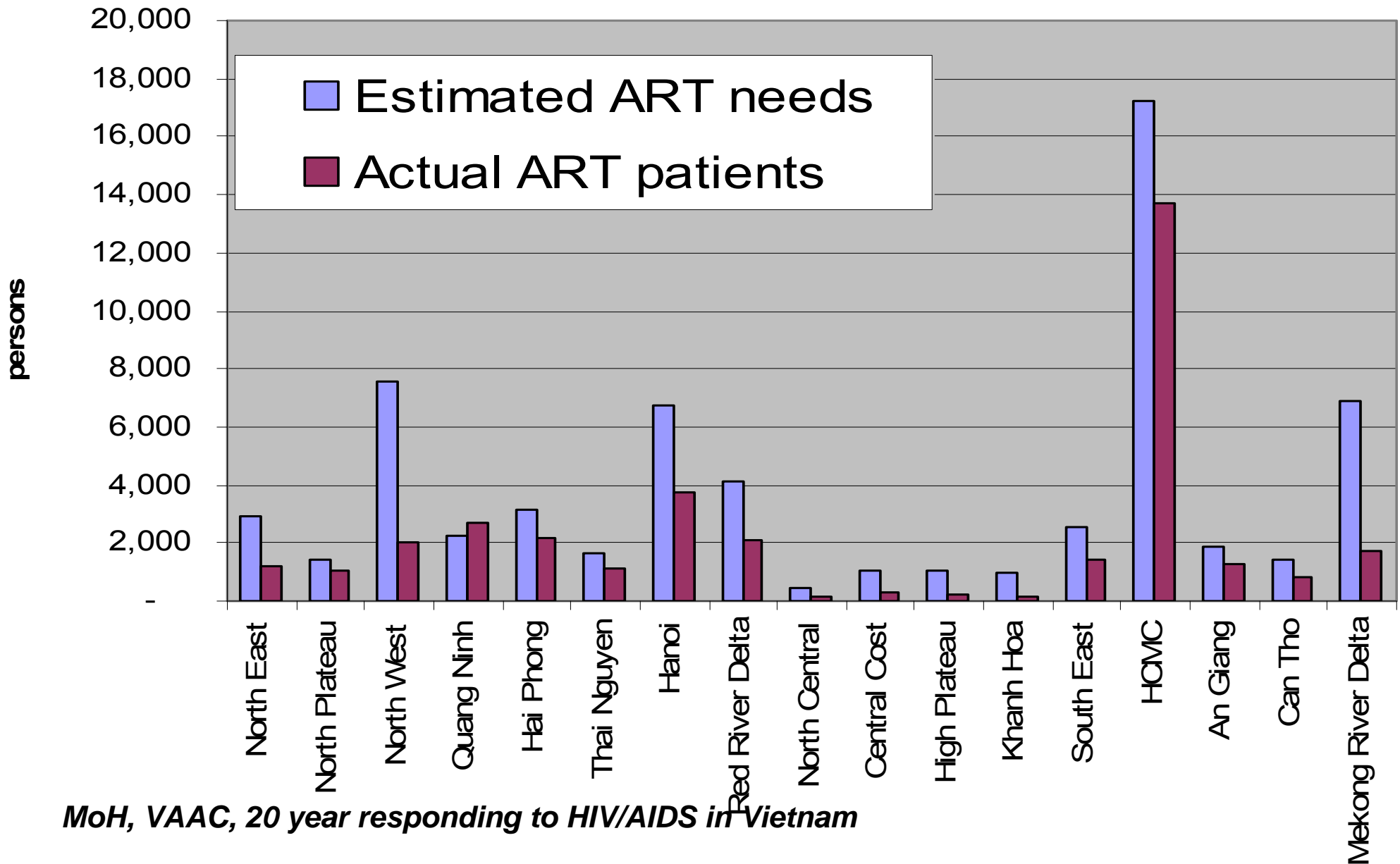


# ART CONTRIBUTES TO AIDS DEATH DECREASE

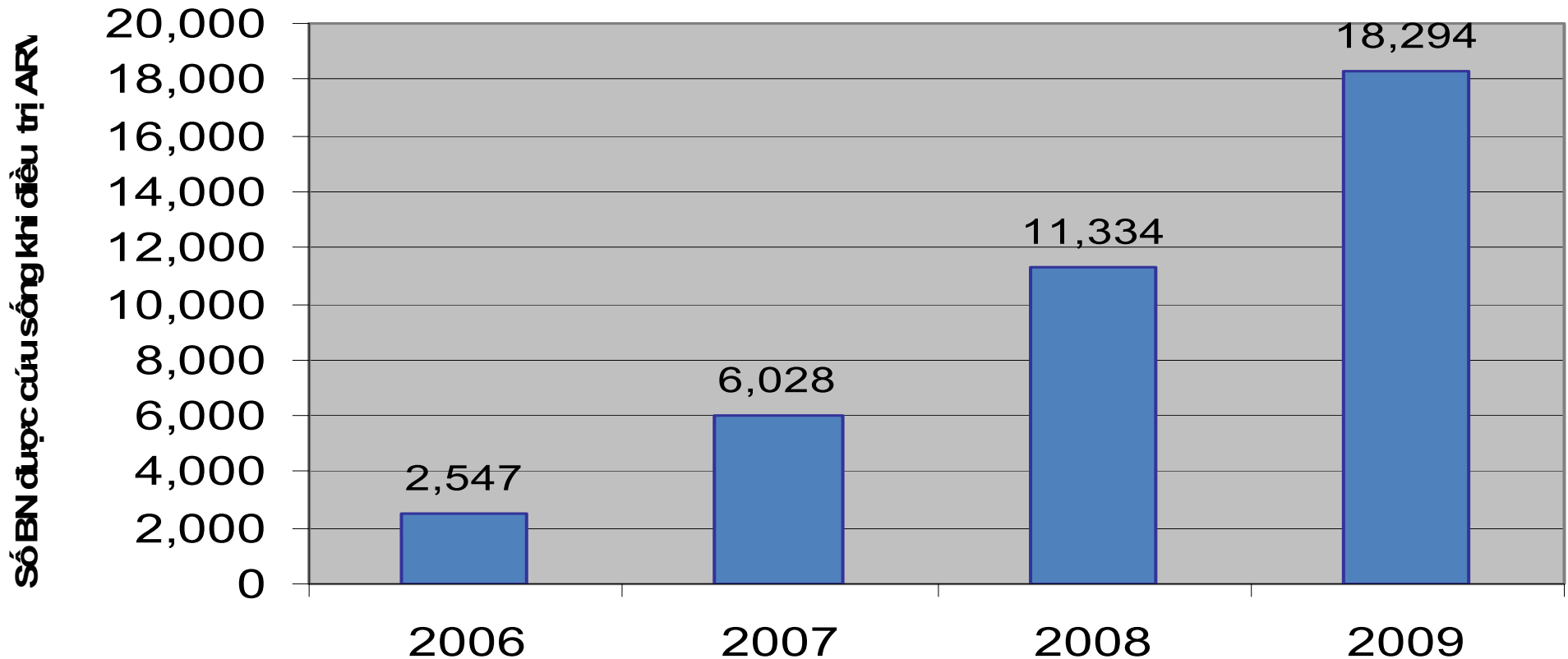


MoH, VAAC, 20 year responding to HIV/AIDS in Vietnam

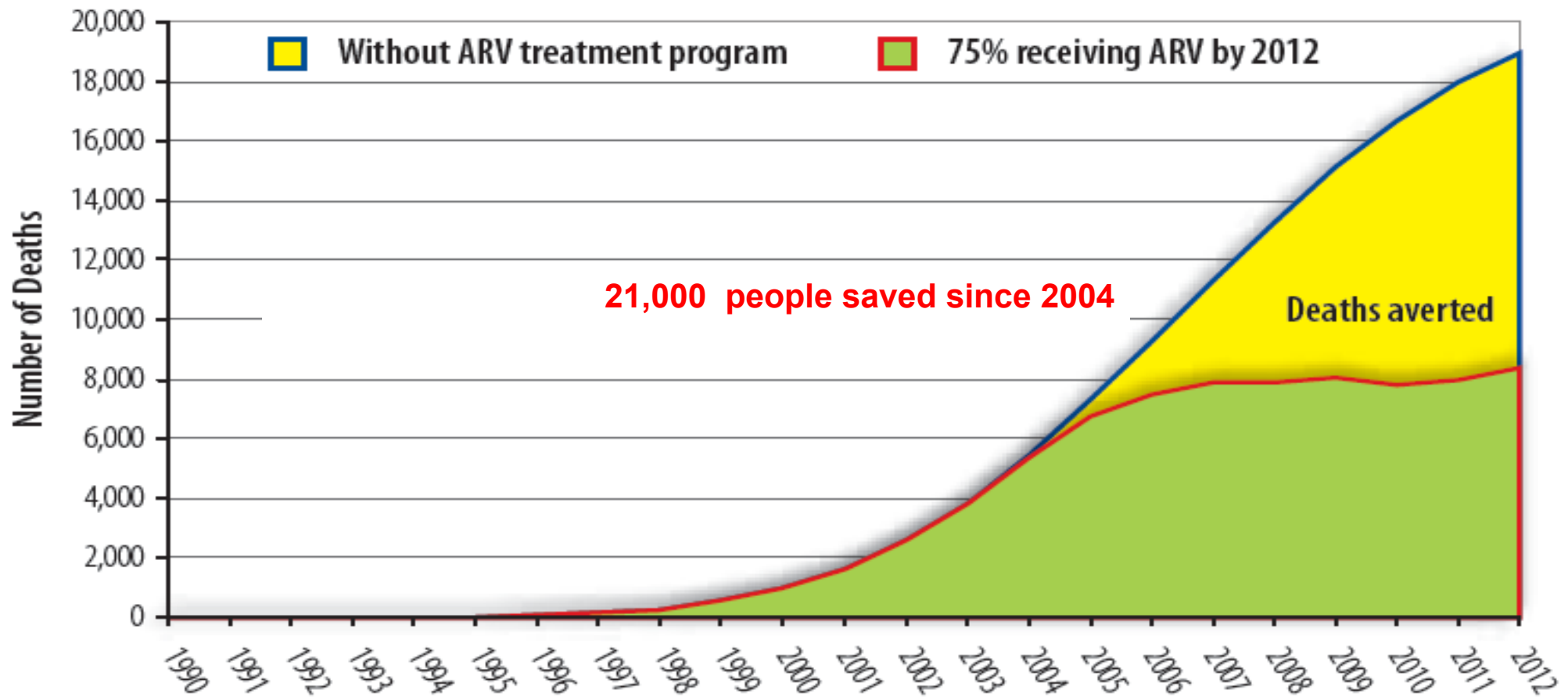
# NEED AND ACTUAL ART IN VIETNAM



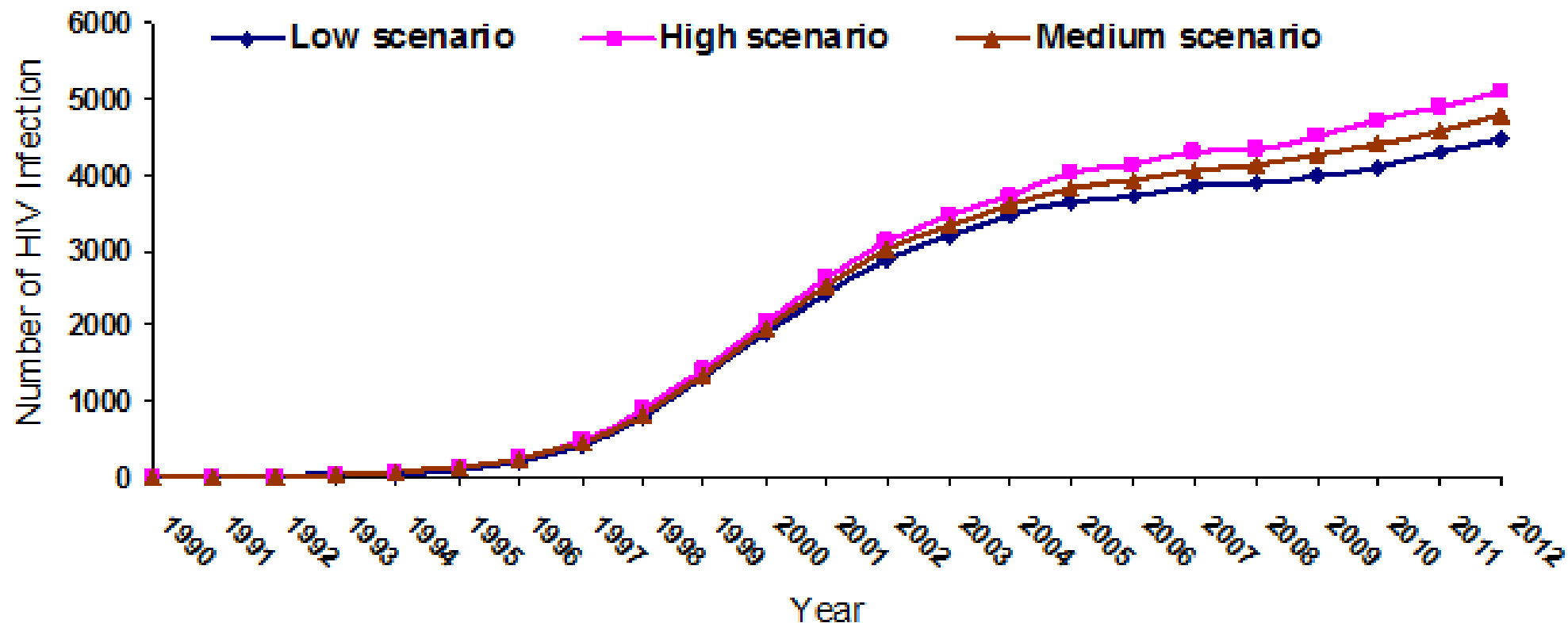
# Estimates of HIV/AIDS patients survived due to ART.



# Impact of ART in mortality reduction PLHA.

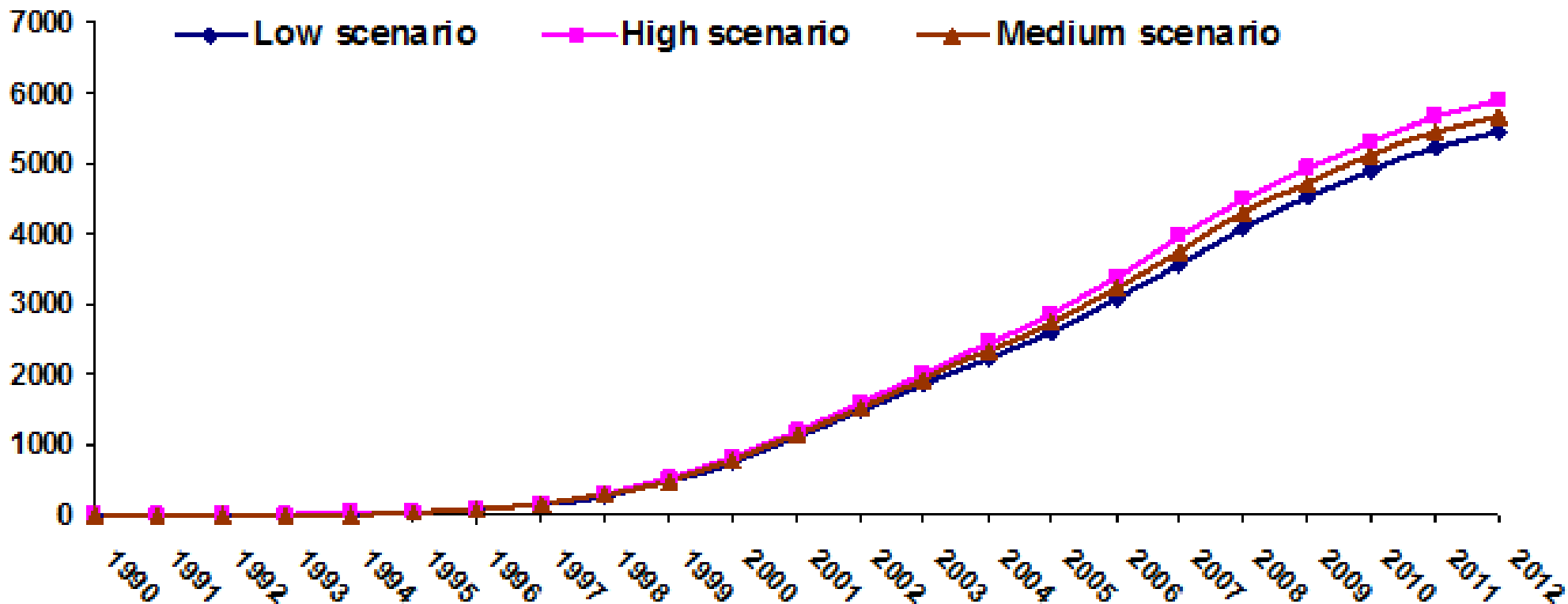


# ESTIMATED INFECTIONS AMONG PREGNANT WOMEN 4,800 by 2012



# ESTIMATED INFECTIONS AMONG CHILDREN < 15 YEAR OLD

5,100 by 2010 and 5,700 by 2012

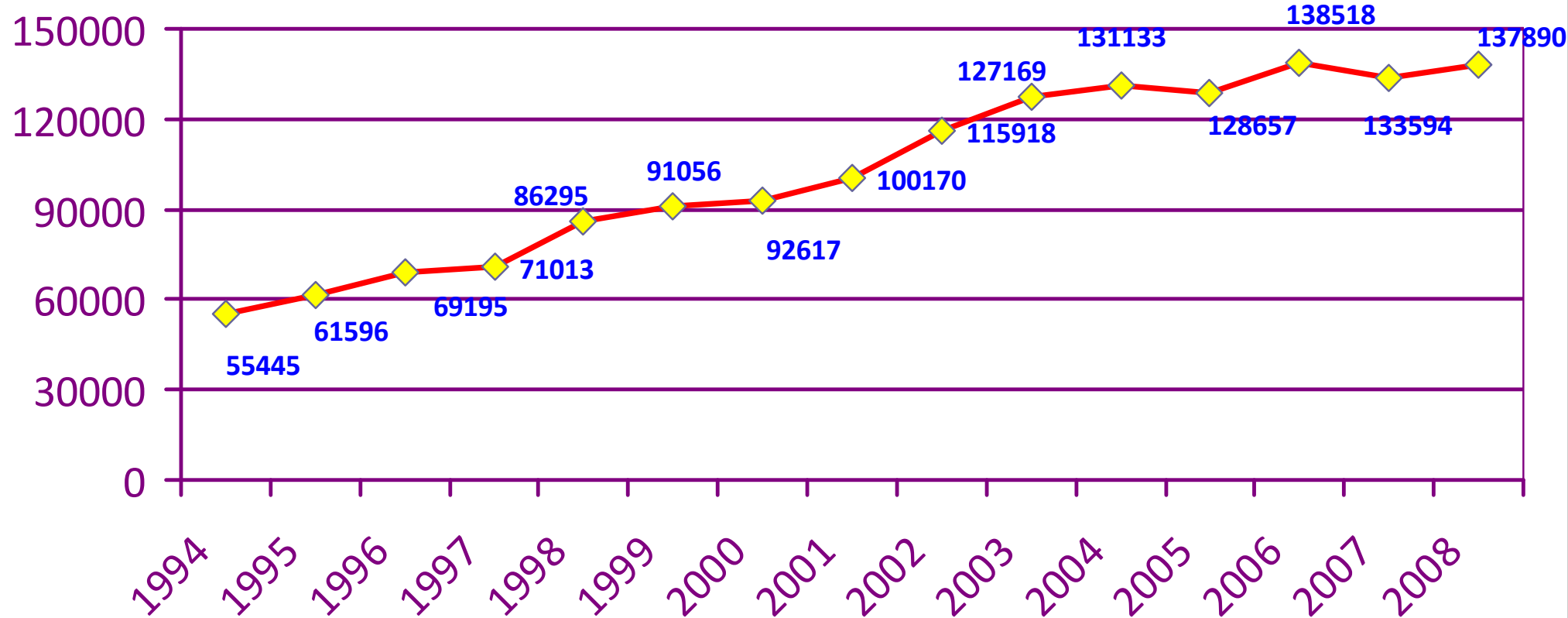




# **HAMRM REDUCTION PROGRAMS**

# Reported number of drug users managed by MOLISA/DOLISA system 1994 - 2008

## Drug users



# **Methadone Maintenance Therapy**

## **Evidence-based**

- **Reductions in risky behaviour.**
- **Reductions in HIV infection.**
- **Reduction in hospital admissions and cost of care, support and treatment.**
- **Reduction in Crime and Deaths.**
- **Improved ART adherence.**
- **Improved employment, social functioning and mental health.**

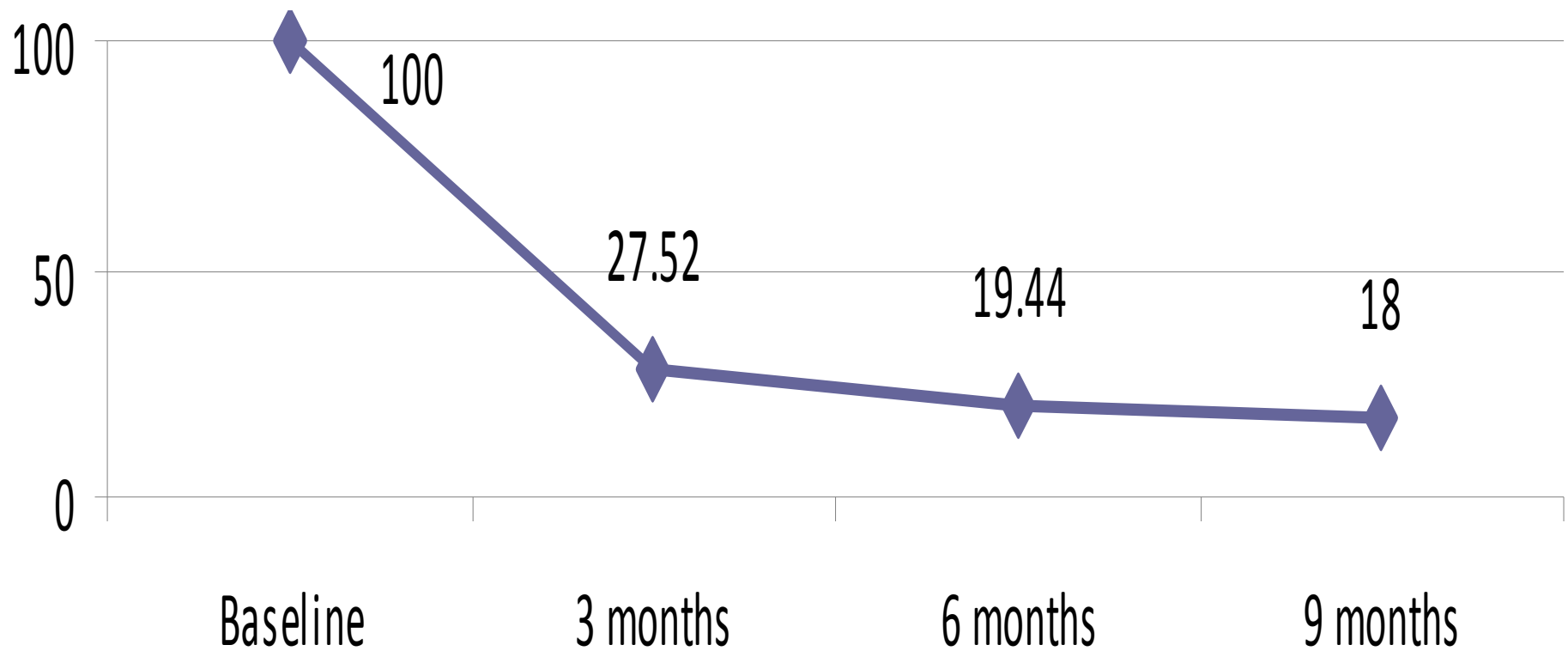
# Co-existence of harm reduction and compulsory treatment centers (06 centers)



- By October 2010, 11 clinics in 5 cities and provinces. More than 2,300 patients have been enrolled, and the number is expected to rise to 80,000 by 2015 (VAAC, 2010)
- More than 100 compulsory treatment centers with about 60,000 residents (WHO, 2009)

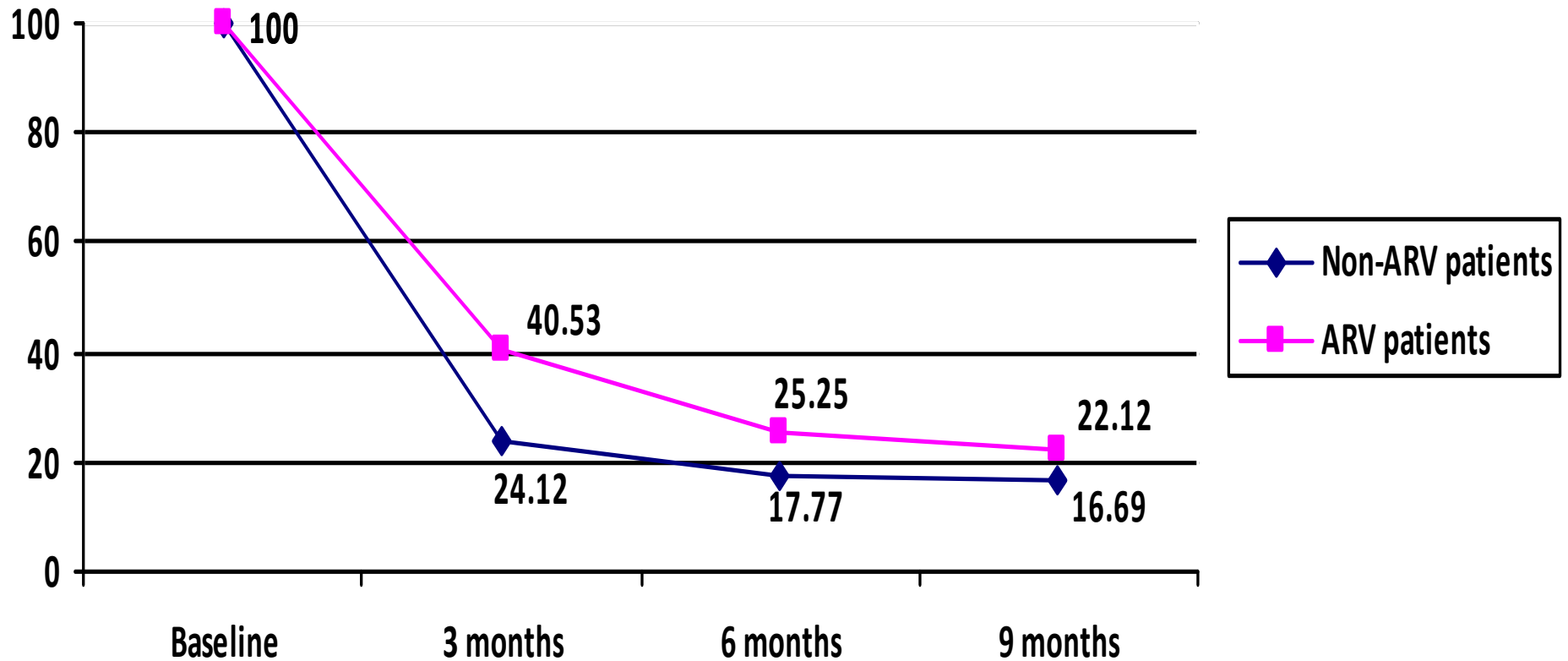
# Illicit opioid use over time

965 enrolled in the MMT program in HP and HCMC, Vietnam

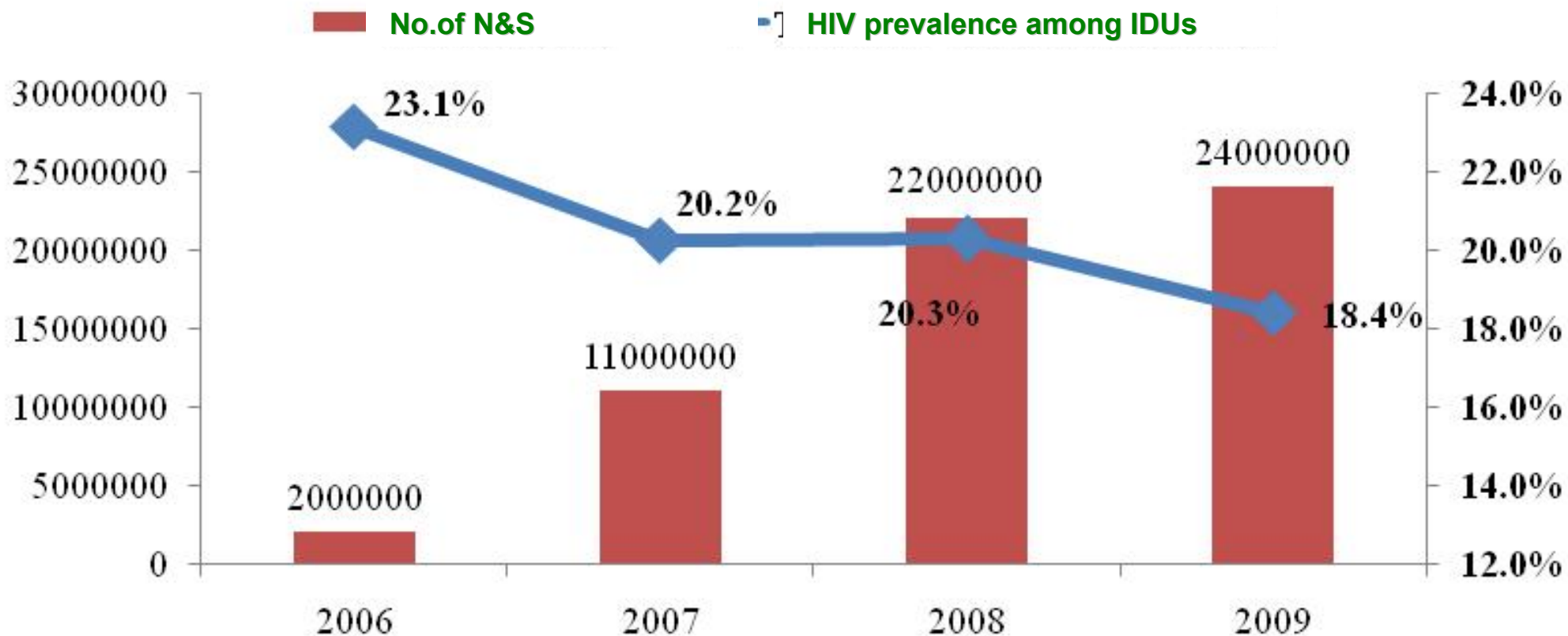


# Comparison of positive urine tests for ARV clients and non-ARV clients at clinic based testing.

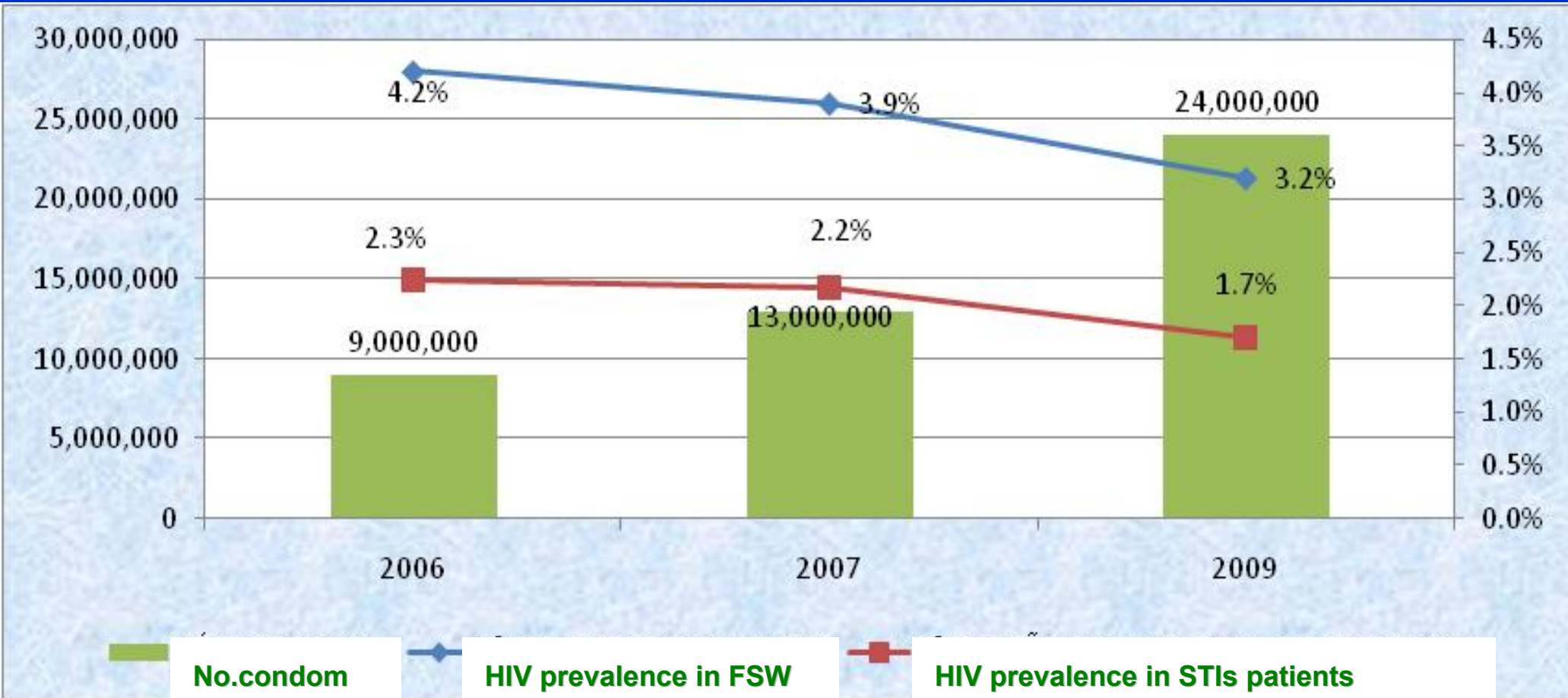
965 enrolled in the MMT program in HP and HCMC, Vietnam



# NEED & SYRINGE DISTRIBUTION AND HIV INFECTION AMONG IDUs



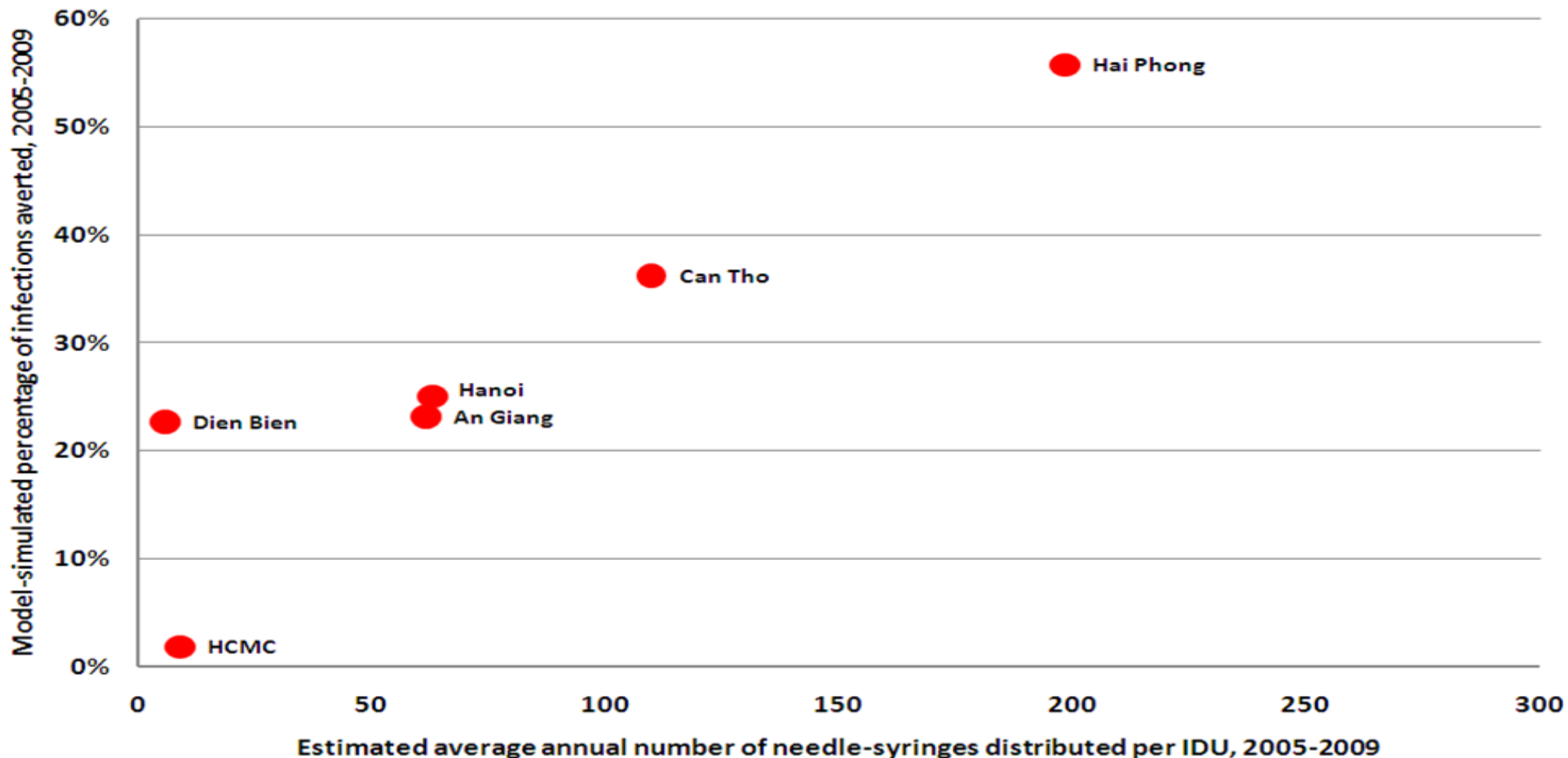
# CONDOM DISTRIBUTION AND HIV/STIs AMONG FSWs





# Impact of harm-reduction in HIV infection, 2005 - 2009

Percentage of new infections averted among IDU due to needle-syringe distribution, 2005-2009



# CHALLENGES

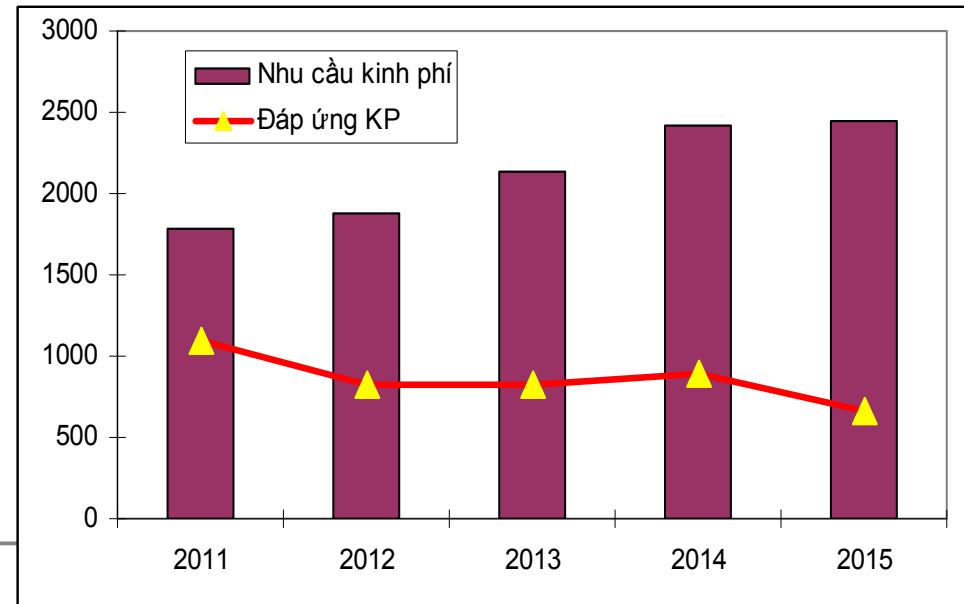
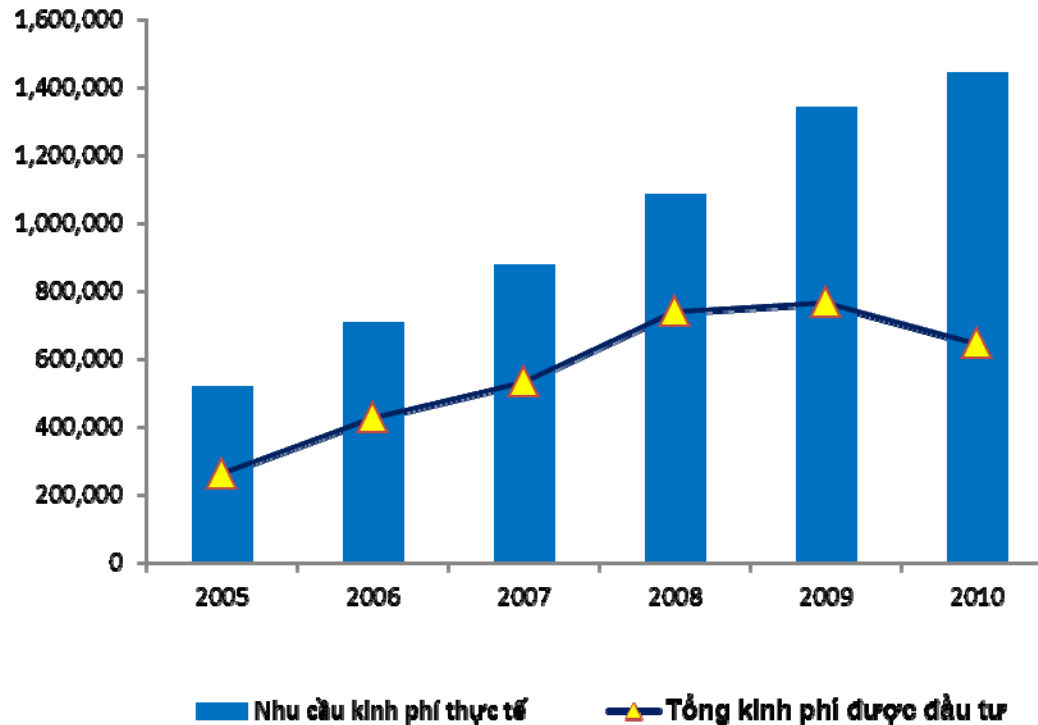
# Challenges for HIV treatment and care in Viet Nam

- Late treatment initiation common (average baseline CD4 count<100).
  - Late diagnosis; Lost-to-follow-up between diagnosis and care.
  - Mortality high in early phase of ART
- Limited access and retention
  - Limited access in closed settings and remote mountainous provinces
  - Stigma, discrimination, punitive laws against MARPs - barriers for access

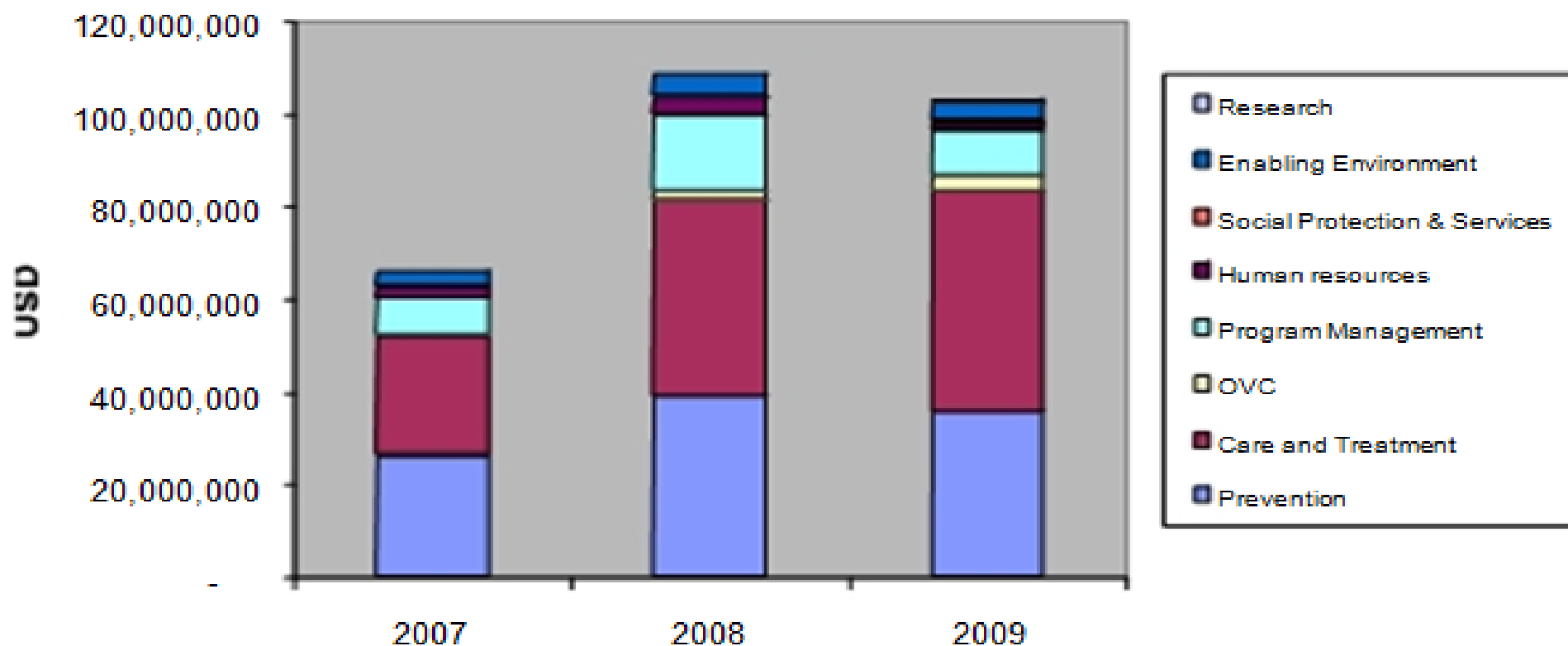
# Challenges for HIV treatment and care in Viet Nam

- **Burden of TB, viral hepatitis and drug dependence high**
  - **Highly verticalized HIV, TB, MCH programs – limited collaboration and linkages.**
  - **Limited availability and complex procedures of drug dependence treatment.**
- **Sustainability challenges**
  - **90% of HIV treatment and care budget funded by external donors.**
  - **HIV services delivered through donor projects.**

# Lack of budget



# National spending on HIV by categories, 2007-2009



*Source: National Funding Matrix for Viet Nam 2007-2009*

# **ADAPTING TREATMENT 2.0 IN VIETNAM**

# Adapting Treatment 2.0 into Viet Nam



- Pilot implementation in two provinces (Can Tho, Dien Bien)



# Adapting Treatment 2.0 into Viet Nam

- Expand HIV testing and counseling
  - Apply rapid test algorithm.
  - Expand HIV testing and counseling to primary care sites (CHC) and through mobile/outreach teams.
  - Integrate into health services (e.g. ANC, TB, STI, methadone maintenance).
- Simplify and decentralize
  - Simplify ART and methadone procedures.
  - Pilot and expand ART and methadone provision/ follow-up at commune health station and closed settings
- Integrate
  - Promote “one-stop” service delivery model. Ensure referral among the services:
    - From HIV diagnosis to HIV prevention, treatment and care.
    - Among HIV-TB, HIV-methadone and HIV-MCH

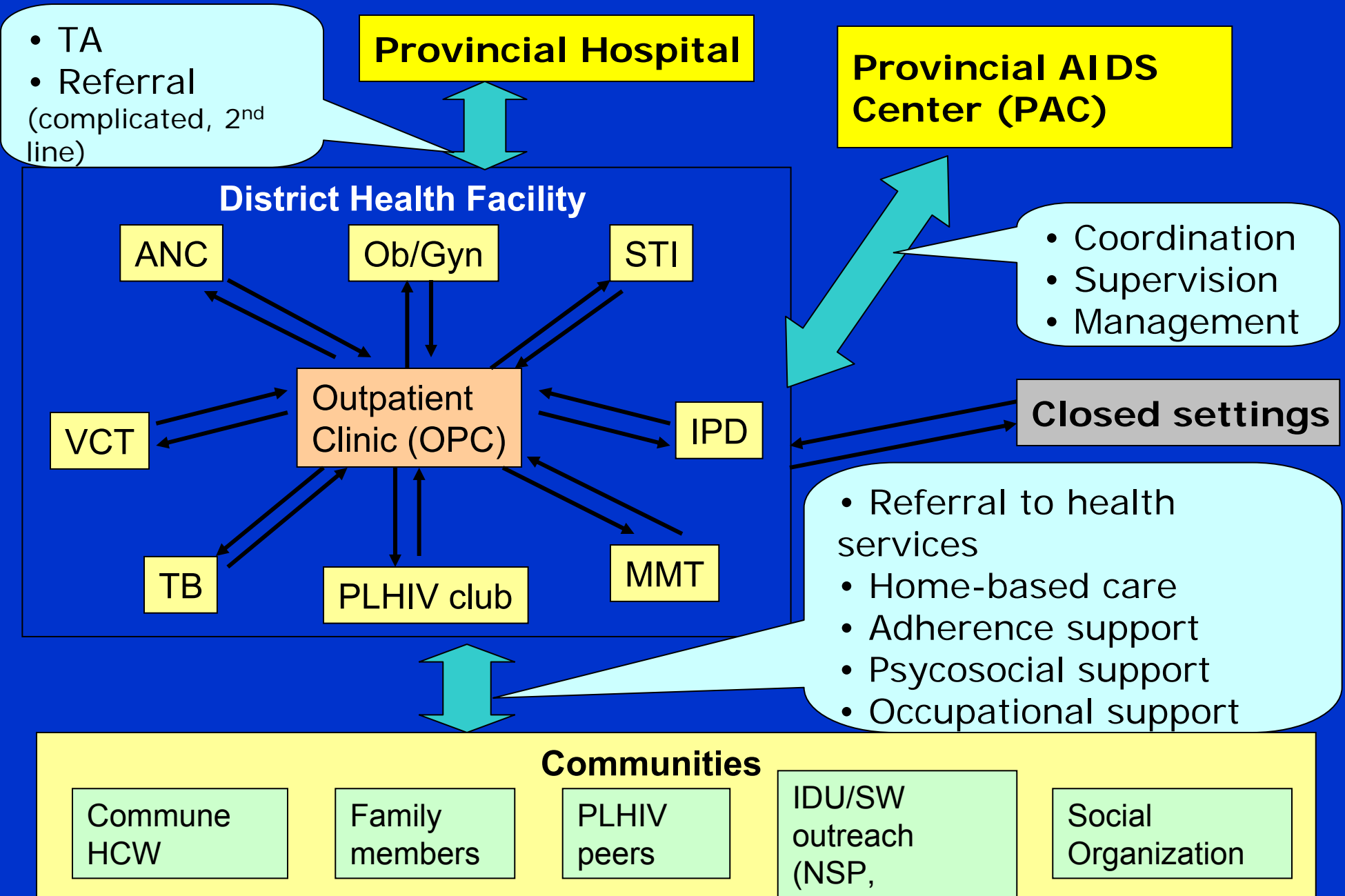
# **Adapting Treatment 2.0 into Viet Nam**

- **Mobilize communities**
  - Support PLHIV and MARP peer educators to take active roles in HIV treatment, care and support.
  - Enhance treatment knowledge among MARP peer educators (benefits of early diagnosis and treatment initiation).
  - Promote public-private partnership.
- **Optimize drug regimens**
  - Shift towards less-toxic regimens (from d4T to TDF)
  - Promote use of fixed dose-combinations
- **Promote point-of-care diagnosis.**
  - Develop rapid test-based algorithm for HIV diagnosis.

# Adapting Treatment 2.0 into Viet Nam

- **Reduce costs and sustainability**
  - Finalize costing study and resource needs estimation.
    - Standardize service packages. Analyze cost-effective strategy.
  - Strengthen national health insurance system to cover standard HIV treatment and care package.
  - Maximize efficiencies
    - Shift from project approach to program approach
    - Integrate HIV services and laboratory functions into health system
  - Promote earlier treatment initiation ( $CD4 \leq 350$ )
    - Reduce cost for hospitalization and OI treatment
  - Integrate ART on HIV and TB

# Proposed Continuum of prevention and care in Viet Nam



# **SUMMARY**

- **HIV epidemic in Vietnam is lowing down as results of:**
  - **Comprehensive harm reduction: needle-syringe and condom distribution, methadone maintenance therapy.**
  - **Successful ART scale-up: 18 times increase in the in past five years (2005-2010)**

# TARGETS BY THE YEAR 2015

1. HIV prevalence < 15% among IDUs, <3% among FSWs, and <0.2% among pregnant women.
2. 80,000 IDUs received MMT
3. 105,000 PLHA received ARV
4. HIV MTCT <5%





***Thank you for your  
attention***